A CRITICAL ANALYSIS
OF
INDUSTRIAL PENSION SYSTEMS

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BY

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PREFATORY NOTE

In offering this volume on industrial pension systems to the public the undersigned desires to explain that the material was gathered in the course of an investigation of the pension problem made for the Bemis Bro. Bag Company, of which Mr. A. F. Bemis is President, and that it is through their courtesy that the information thus assembled is made available for publication. It should be understood, however, that the Bemis Bro. Bag Company assumes no responsibility either for the accuracy of the results or for any opinions, expressed or implied.

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CONTENTS

TABLES

CHARTS

A CRITICAL ANALYSIS OF INDUSTRIAL PENSION SYSTEMS

CHAPTER I

PURPOSES OF PENSION SYSTEMS

Introductory

"Pensions are more irrevocable than any ordinary kind of legislation." This statement, while applied by the author[1] to governmental pension systems, is almost equally applicable to private pension schemes. A pension system never should be started by an employer until he has satisfied himself beyond reasonable doubt that it will be continued. An establishment may suffer little because it does not adopt a pension system. But it may suffer much if it adopts a system without most careful examination.

Many industrial corporations have studied the problem long and carefully without reaching a decision. Some apparently have decided defi-

[1] Geoffrey Drage. "The Problem of the Aged Poor."

nitely against a formal system. Many others, which have adopted plans without such careful study, have been compelled almost immediately to revise them. It has been stated that very few of the industrial pension plans in the United States to-day are so financed that they are likely to remain solvent without refinancing or modification. "With that staggering fact staring them in the face, it is no wonder that sensible business executives refuse to be stampeded into adoption of pension plans." [1]

In the case of many municipal and other public service pension plans, failure carefully to count the cost has already resulted in bankruptcy of the pension system, either actual or constructive. Indeed, it is hardly too much to say that the history of pension schemes has been a record of mistakes or failures. Even the elaborate Carnegie Foundation plan was forced to undergo a radical reorganization only a few years after it was started.

The financial aspects of the question, moreover, important as they are, are of subordinate consequence as compared with the broad economic and social aspects.

The problem is an exceedingly complex one.

[1] "Pensions for Industrial Employees." Elmer B. Tolsted in *Cotton*, November, 1920.

The very nature of a pension is by no means generally understood or, indeed, easily definable. The word "pension" has come to have a very loose significance, and often is applied to payments which in a strict sense are not pensions at all. The various types of pension systems present differences so marked that they cannot be intelligently discussed as a single group. Arguments applicable to public service pensions may not hold in the case of private systems. Finally, it is extremely difficult to determine the ultimate effects of such systems, not merely upon the worker's efficiency and his material well-being, but even upon his character. A system which upon its face is well adapted to meet an immediate condition may produce evils far worse than those which it seeks to remedy.

A leading British actuary in discussing general old age pensions has said: [1]

"The real fact is, that the more one studies such a thorny question as this, the more numerous and the greater are the difficulties which become apparent, and the more it is seen that, if the working classes for whose benefit old age pensions are advocated are not to be injured rather than assisted, the utmost caution and deliberation must be exercised before any irrevocable step be taken."

[1] George King; cited by Lee Welling Squier in "Old Age Dependency in the United States," p. 277.

It is, therefore, almost imperative, before taking up the question how a pension system shall be established, to consider whether it should be established at all. Until a satisfactory answer can be given to the latter question, there is little occasion to discuss the question of method.

Broad Objects of Pension Systems

Among the more important motives which lead industrial employers to adopt pension systems are:

A desire to provide for the old age of dependent, superannuated employees.

A desire to reward employees who have rendered unusually long service.

A desire to increase efficiency, first, by the elimination of superannuated or incapacitated workers on a humane basis and, second, by stimulating the good will and effort of the active force.

A desire to hold the worker to the job, thereby reducing labor turnover.

A desire to exercise a disciplinary control over workers in respect to strikes and in other ways.

In some pension plans all of these motives are present; in others, only a portion.

The broad objects of pension systems, as above enumerated, will now be examined.

Pensions as a means of providing for dependent and superannuated workers

A large number, perhaps a large proportion, of industrial workers either can not or do not make adequate provision for their old age. When such workers reach a stage of superannuation the employer is faced with the alternative of throwing them back on society, with the knowledge that they will become objects of charity, or of himself making some provision for their remaining years. This practical fact has been an important and probably the controlling consideration in the establishment of industrial pension systems of the day. From humanitarian motives the employer is not content summarily to dismiss such superannuated workers after long years of service. Moreover, he often hesitates to do this, on the practical ground that such a policy may have an unfavorable reaction upon the larger body of employees still continuing in the service.

Opinions as to the moral obligation of the employer. At the outset it is important to determine whether the employer is really under a moral obligation to make provision for such workers. Clearly, if such a moral obligation exists, it should be met.

The idea has a strong appeal. The worker has rendered a lifetime of service, yet for one reason or another may not have acquired a competence. Worn out with years of labor, he is no longer able to secure employment. Is not the employer, therefore, properly to be charged with the responsibility of maintaining him in his old age?

Some writers on the pension problem insist that there is such an obligation. Some industrial managers, moreover, have accepted this point of view. While the contention has been set forth in various ways, it may be epitomized in the statement that "Industry should not 'scrap' its old and incapacitated workers and throw them back on society in their dependent age."

In the opinion of many other students of social problems, however, there is no such obligation. Instead, these critics hold that the responsibility for providing against old age rests primarily upon the individual himself or, at least, that it cannot fairly be placed upon the employer alone. They argue that, while the employer may elect to provide for his superannuated workers when they have completed their service, he is under no moral obligation to do this. Some, furthermore, contend that any attempt to relieve the individual of his responsibility is certain to have a deteriorating influence upon private character, by diminishing

the qualities of self-reliance, thrift, and even self-respect.

The general attitude of employers on this point is, perhaps, sufficiently indicated by the fact that the great majority of private pension plans now in operation in industrial establishments specifically deny any right on the worker's part to a retirement benefit, and place this on the basis of a gratuity.

The argument that the employer is under a moral obligation to provide for the old age of his workers is reflected in the following excerpt from a discussion by Squier in his "Old Age Dependency in the United States": [1]

"From the standpoint of the whole system of social economy, no employer has a right to engage men in an occupation that exhausts the individual's industrial life in ten, twenty, or forty years; and then leave the remnant floating on society at large as a derelict at sea. From the standpoint of public economy, it is argued that every industry should be compelled to bear its own burden of waste, whether of material, machinery, or human life; that it is as equally unjust and improvident for an industry to turn adrift its wornout and aged employees, to be taken up and housed at public expense in almshouses, as it is for the employee himself to stop work and become a tramp or vagrant."

[1] Lee Welling Squier. "Old Age Dependency in the United States," pp. 272-3.

A similar viewpoint has been expressed by many other writers on the pension problem.

In an effort to assemble further opinion upon this question, an inquiry was submitted to a considerable number of economists, publicists, and social workers of the country, in the following form:

"What is the moral obligation, if any, of the industrial employer towards his employees with respect to support in their old age?"

A representative selection of the views thus obtained is presented herewith.

Affirmative opinions. An affirmative position on this question was taken by John R. Commons, of the University of Wisconsin, as follows:

"On the whole, I do not think that wage earners, under existing conditions, can be expected to provide for old age. This is on account of the great uncertainties and insecurity of their work and the fact that they should be expected to support their children and give them an education, etc.

"Considering these matters, I should say that there is a moral obligation on the individual employer consisting in making some provision for his employees in old age, increasing with their length of service, but that there are limits to this obligation in individual cases and that the total obligation is a joint obligation upon indus-

try and upon the public which cannot be met except by legislation."

Frank A. Fetter, of Princeton University:

"If the old age of wage-earners is not otherwise provided for, the moral sense of our time surely recognizes that the obligation of the employer has not been fully met in the case of workers who have grown old in his service."

Several of those who took the ground that there was a moral obligation to provide for the superannuation of industrial workers argued that the obligation could not fairly be placed upon the individual employer but, rather, fell upon Industry as a whole. Thus, Franklin H. Giddings, of Columbia University, said:

"I cannot see that the individual employer is under any moral obligation to support his employees in their old age by pension or otherwise. But I do think that the industry as a whole should for many reasons, many of them mere expediencies, assume the obligation. By this I mean that the charge which the industry makes upon the public in the prices of goods should in the long run provide for the old age of employees who have been long connected with it and whose service has been faithful."

William M. Leiserson, Chairman of the Labor Adjustment Board of the Rochester Clothing Industry, likewise, held that "there must be consid-

erable doubt as to the moral obligation of an individual employer toward his superannuated employees; but there can be no doubt whatever that an industry has a distinct moral obligation not to throw on the scrap-heap men who have devoted their lives to the industry and have worn themselves out in its service." He suggested that the burden of a pension system might be too great for a small employer, but that in such cases an association of small employers in a given industry might distribute the burden in such a way as to make a pension system practicable. He contended, however, that "a large employer whose business forms a substantial portion of the industry as a whole owes it to the workers whom he has drawn into the industry and who have dedicated their lives to it, that they shall be taken care of in their old age."

Rev. John A. Ryan, D.D., Director of the National Catholic Welfare Council:

"It is quite clear to me that industry, as a whole, is morally bound to provide the workers as a whole with sufficient income to meet not only present needs, but all the normal contingencies of life, including disability and old age. Whether this provision should all be made in the form of wages, leaving the employee to insure himself against all these contingencies, or whether the current wages should merely meet

current living costs, insurance to be provided by the industry, is a question of method rather than principle.

"All this refers to industry as a whole. What the obligation of an individual concern is toward those persons that it has at any given time in its employ, is a more complex and difficult question, inasmuch as many of these employees have spent a greater or less portion of their working life in the employ of other concerns. Therefore, their present employer cannot fairly be required to make the whole provision for their future. The general principle seems to me clear enough, that the employer is under obligation to provide each of his employees during a given period, say, a year, with that amount of insurance for old age which is proportionate to the total amount of such necessary provision. For example, if the total working period of an employee is forty years, then the employer ought to provide one-fortieth of the total necessary old age pension every year."

The various statements above given clearly contain a suggestion that the industrial employer or, at least, Industry as a whole, is under a moral obligation to provide for the support of superannuated employees. It should be noted that some of the opinions to this effect are qualified.

Negative opinions. As opposed to the idea of a moral obligation, but not necessarily in opposi-

tion to pension systems, the following statements may be cited:

Dr. Arthur T. Hadley of Yale University:

"The question what form the moral obligation of the employer should take regarding the pension system involves the whole question of the structure of industrial society.

"Under the old-fashioned system, where it was supposed to be each man's duty to save as far as he could, the idea prevailed in this country that the possible withholding of wages in order to provide a fund for a pension system was an unwarranted attempt to keep the employee under the guardianship of the employer; that the fullest right was done by paying the highest wages the market afforded, without any withholding; and that all disability payments, from whatever cause, should be based on the needs of each particular case, rather than claimed as a right.

"As long as most of the employees were ambitious to become capitalists, and did save money, this worked well. The fact that they fail to feel this ambition or make these savings to-day is, however, an unfortunate fact with which we have to deal; and pension systems are one of the means by which we deal with it. I find it, however, a little hard to speak of the moral obligation to adopt a pension system, when the old system, under which we did not have to pay pensions at all, was better than the new one, when we utilize them to meet an evil which we

cannot deal with otherwise. I think we shall stand on clearer ground if we base our pension systems on expediency rather than on morals."

Henry W. Farnam of Yale University:

"I do not hold that the individual employer has a moral obligation to support his employees in their old age. The mere fact that employees change so frequently in industrial establishments and that so few of them work for very many years in one place, would clearly make the obligation, if it existed, one to be borne by a number of different employers; it would certainly be unfair to expect the last employer to bear the entire charge.

"I look upon social insurance as a practical matter to be adopted in the interest of society as a whole and I therefore believe that the old age pension should be a social obligation to be financed by the worker himself, the employers as a group, and society as a whole through its taxpayers."

T. N. Carver of Harvard University:

"I have never heard or read a satisfactory argument to show that the employer was under any moral obligation whatsoever in the matter of industrial pensions. The reasons given have always seemed to me to be singularly inconclusive. I am inclined to think that the only sound reason on which to base a system of industrial pensions is a purely economic one. If the industry is likely to be permanent, or at least to outlast several

generations of men, the management must decide whether they think it will pay in the long run to pension employees. If it will enable the industry to secure and maintain a superior quality of employees and keep them in a frame of mind which will increase their usefulness and productivity, that would furnish a valid ground for a pension system. That, I believe, is the one satisfactory argument in favor of pensions, or retiring allowances, for university professors. . . . This has always seemed to me a sufficient and satisfactory reason for a system of pensions, without bringing in the question of moral obligation."

Edward T. Devine, of the Association for Improving the Condition of the Poor, New York City, held that while it is desirable that Industry shall bear the burden of accidents and, to a large extent, the hazard of disability among workers, it should not be called upon to assume the burden of their support in old age. He contended that the responsibility of Industry in reference to old age lies chiefly in ensuring such conditions of work that employees will not become worn out before they should be, and in paying wages that permit the individual to make a provision against his superannuation. "Individuals who become dependent because of old age are, of course, a responsibility for the community, but should not be a charge on Industry."

Many who oppose the idea that the employer is under a moral obligation to provide for superannuated employees take the ground that the primary duty and, indeed, the full duty of the employer is to pay adequate wages and that when this is done workers may properly be required to care for themselves in old age. This viewpoint is illustrated in the following statement by W. Z. Ripley, of Harvard University:

"My predilection is all for such recognition of the workers' rights in adequate wages as shall force him to meet the problem of old age for himself. I conceive that the coddling process softens both the fiber of the employee and of the employer. It tempts the employer to seek welfare as an alternative for paying full measure of wages, and it leads the employee to lean upon a beneficent despot who shall protect him against the shocks of adversity. Consequently I personally reject the conception of moral obligation, but would substitute for it what seems to me a more virile view, that wage relationships should be established in the light of mutual respect and even apprehension upon a level which will permit the workers to take care of themselves."

Miss Julia C. Lathrop, former Chief, Children's Bureau, U. S. Department of Labor:

"It appears to me clear that the obligation of the employer ceases when he has paid an adequate wage, by which is understood a wage per-

mitting decent living and a reasonable margin for savings during the period of employment, except as he may be joined with the employee and the State in a system of retirement or old age insurance."

The following statement by W. E. H. Lecky, while dealing with general old age pensions, may fairly be cited in this connection:[1]

"There is no real ground for the assertion that because an industrious man has failed to earn a sufficiency, he has a moral right to be rewarded for his industry out of the proceeds of a tax levied upon his neighbors, to whom he has rendered no service, or none which has not been paid for in wages."

It should be repeated that the above statements do not necessarily mean that these writers condemn pension systems. The question at the moment is whether the employer is under a moral obligation to provide for the superannuation of his employees. One may reject the concept of a moral obligation, yet advocate a pension system on other grounds.

Thus John A. Fitch, a well-known writer on labor matters, expressed the opinion that the problem of old age dependency is a "social instead of an industrial problem, and that the only

[1] W. E. H. Lecky. "Old Age Pensions: Collection of Short Papers," p. 103.

proper solution of the question is a government pension." Since, however, this was not likely to come in the immediate future and since, in the meantime, employers are confronted with the problem of superannuation, he held that employers were not only justified, but wise, in establishing pension systems. A particular reason for this was that when an employer "gets stability in addition to day's work, he has received a value over and above what he has paid for through the wage."

A fair summarization of these divergent views is that, on the whole, pensions are a matter of expediency rather than of moral obligation, and that in so far as an employer feels under compulsion to provide for the old age of his workers, this arises from humanitarian considerations engendered by association, rather than from the existence of a definite right on the workers' part. It will be noted that several of those who maintain that a moral obligation exists hold that this does not fall solely on the individual employer, but on Industry in general, or upon employers, employees, and the public jointly.

If the theory of a moral obligation on the part of the employer holds anywhere, it would seem obvious that it should obtain in the case of the

Government as employer. Yet most disinterested students of governmental pension systems reject the idea of obligation and base their advocacy of such systems on the practical ground of expediency. Thus, one writer on government pension systems has said:

> "Sentimental arguments are sometimes advanced to prove that the Government owes some special charity to the men who have grown gray in its service. . . . They are no more entitled to public charity and benevolence than men who have grown gray in some private capacity. Public contributions to a retirement system are to be justified, not on any ground of benevolence or philanthropy, but on the ground that they are payments to improve the character of the service."[1]

Attitude of Labor in general toward private pension systems. Perhaps the most convincing argument on this point is found in the attitude of Labor itself. One of the significant facts of the pension problem is that the demand for pension systems comes from the employer and from the public rather than from the worker. At best, the attitude of Labor toward pensions is one of comparative indifference. It is true that employers who have inaugurated pension systems often

[1] Lewis Meriam. "Principles Governing the Retirement of Public Employees," pp. 16 and 17.

have received expressions of appreciation from the recipients of the pension benefits. Replies from a large number of employers as to the attitude of their workers were secured in the course of this study. Representative statements on this point are given below:

"The plan has been well received by the employees, and that it is highly appreciated is evidenced by the many letters received from grateful beneficiaries."

"Our opinion of the plan is that it is well received and appreciated by the employees, particularly those who have been with the company for a number of years and who are approaching the age of retirement."

"We know that our employees, particularly those who are no longer young, are very favorably impressed with our pension system."

"Our pension system is very much appreciated by all classes of workers. They know it is a reward for faithful service and all apparently fully appreciate its advantages."

"We believe our annuity plan is contributing in making our personnel happy and contented, although you will, of course, realize that this plan is but one feature of our general policy."

On their face these statements indicate decided appreciation. But the fact that such appreciation is seldom reflected in a reduced labor turn-

over,[1] which would be its most natural expression, robs this evidence of much of its apparent significance.

At least it is certain that Labor has conducted no active campaign to secure the inauguration of private pension systems. Instead, the almost universal attitude of Labor may be found in some such slogan as "Give it to us in the pay envelope," or "Labor wants justice, not pensions."

This attitude of Labor towards private pension systems is further illustrated by the following extract from testimony before a British Retirement Commission:

> "We have a number of artisans who, about five years ago, petitioned that they might be put entirely upon trades union rate of wages and the option was given to them, either to remain under the terms they were with pensions or to go at once to trade union terms, and these four hundred men elected to have a larger immediate salary and forego all the rights to pension and sick pay and that kind of thing."[2]

This feeling is, moreover, characteristic of salaried workers, as well as of wage-earners. This is indicated by the following result of a vote of

[1] See p. 37.

[2] Sir J. McDougal, of the London County Council, testifying before the British Royal Commission of Superannuation in the Civil Service, British Parliamentary Papers, 1903, Vol. XXXIII, p. 138.

employees of the State, War, Navy, and Treasury Departments at Washington in 1911:

For immediate increase in salaries independent of any retirement or pension legislation	7,459
For immediate provision for increase in salaries accompanied by straight pensions provided wholly by the Government	1,465
For immediate provision for increase in salaries accompanied by retirement on annuities provided by compulsory savings by employees	1,067
For immediate provision for retirement on straight pension provided wholly by the department	317
For immediate provision for retirement on annuities provided by compulsory savings by employees	186
	10,494

Attitude of Organized Labor. The attitude of Organized Labor toward private pension systems is, at least in many cases, not merely one of indifference, but of definite hostility. In this connection the following statement by Samuel Gompers, president of the American Federation of Labor, obtained in the course of this study, may be noted:

"Paternalism either in government or in industry is abhorrent. It takes away the initiative of the workers who should themselves prepare for old age or the proverbial 'rainy day.' Where the workers receive an adequate wage, one that will permit them to live as an American should live, they will provide their own pension system, and whatever men do for themselves increases their value as workers. It brings independence and a desire to live as men should live without fear of losing that which will protect them in their old age."[1]

The head of a local labor union expressed a similar point of view as follows:

"What the workers want is a sufficient wage so that they can pay for their own protection without charity either from employers or any one else. Labor does not believe in industrial welfare work of any kind, because it is done with the direct intention of weakening the power of organized labor.

"It is not right that a man should go without the full pay he might receive unless he stays with one company.

"The cause of unrest is not the monotony of modern industrial employment, but the helplessness of the men in having no say as to how they

[1] Organized Labor, however, has shown no such aversion to governmental pensions. Again, to quote Mr. Gompers:

"Until the Government itself establishes an old age pension system, labor will insist that pension systems shall be controlled by the workers themselves, without any connection whatever with the employers."

shall regulate their lives. A man should be free to go from one firm to another without jeopardizing his right to protection in his old age.

"A pension scheme with a right to withdraw the 'accrued credits' in case of separation from an employer, would meet many, but not all, the objections to pensions in general."

While these statements can be taken as representing the attitude of Organized Labor, the question may fairly be raised whether in its fundamental aspects the psychology of Organized Labor differs essentially from that of Labor in general.[1]

If provision against superannuation were a definite moral obligation of the employer, it is reasonably certain that Labor would be quick to sense it and to demand its fulfillment.

For all these reasons, therefore, it seems clear

[1] As a further indication of the attitude of Organized Labor towards private industrial pension systems, an experience some years ago with a proposal to inaugurate a pension plan for the organized brewery workers of the country may be cited. The plan recommended was of the contributory type, under which employees would contribute only one-half of one per cent of their wages and the employers a sum equivalent to one and a half per cent. After careful consideration by the officials of the brewery workers' unions, the proposition was submitted to a referendum vote by individual unions and sections of the country, a period of one month being allowed for discussion and another month for voting. The result was the rejection of the plan by a vote of 22,936 to 12,888. (E. B. Phelps. "American Brewery-Workers' Surprising Rejection of Their Proffered Workmen's Compensation and Old Age Pensions.—A Clean-Cut Case of 'The Consciousness of Kind.'")

that the individual employer, while conscious of a certain sense of compunction in the case of workers who have spent a lifetime in his service, is under no compelling moral obligation to provide for their superannuation. The practical problem of dealing with superannuation, however, still remains.

Pensions as a reward for long service

The conception of pensions as a reward for service, while closely related to that just discussed, is distinguished from it in many respects: It takes no account of the necessities of the worker, but, ostensibly at least, pensions alike all, whether self-supporting or dependent, who have rendered a given length of service to the establishment, or who have fulfilled certain prescribed conditions. Furthermore, it does not necessarily require continuance in service until the employee actually is superannuated. Under many plans an employee who commences work at an early age may retire on pension before he can really be termed old, if he has served the required number of years.

The idea of "reward of service" is present in most modern pension systems. However, as will be shown in more detail later, the reward often is subject to many conditions.

As a straight reward of service most pension systems are grossly inadequate. The percentage of workers who go on the pension roll usually is only a small fraction of the total force, or even of those remaining with a company for long periods. Oftentimes it is almost negligible. Moreover, such systems easily become highly inequitable as between individual workers. An employee who happens to have completed, say, twenty or twenty-five years of service may get a pension, the "present value" of which may be thousands of dollars, while another worker, perhaps more efficient and more faithful, but who has just failed of completing the required period of service, may get absolutely nothing. If long service is entitled to a reward, then it would seem that a system which pays a large benefit for, say, twenty years' service, but pays nothing for nineteen years' service, is inherently defective.

A further objection often advanced against the "reward-of-service" idea, as actually operative in many pension plans, is that it may put a premium on inefficiency by keeping men in service, the retirement of whom should be the primary purpose of a pension system. For example, a humane executive may be tempted to retain on his force a worker who needs only one or two more years of service to entitle him to a pension,

even though that worker has become distinctly inefficient. *Paradoxical as it may be, a pension system may thus defeat what is perhaps its most important aim. On the other hand, a heartless factory executive may dismiss an efficient man approaching the retirement age, in order to save the company the cost of maintaining him later on pension.*

Still again, it has happened that where the cost of pensions was rapidly mounting, the terms of the plan itself have been changed, with the result that many workers have been deprived of the pension benefit to which they had been looking forward.[1]

Another objection of a somewhat different sort urged against the "reward-of-service" theory is that it may be interpreted to mean that a worker who has rendered a given number of years of service is entitled to support, even though still able to work. This theory has resulted, in the case of some public service pension systems, in the payment of liberal pensions to men still in the prime of life, who have at once engaged in other lines of activity where their pensions have given them an important advantage from a competitive standpoint. It seems clear that the expenditure of public funds to pay pensions to men still far

[1] In this connection, see p. 169.

from the point of superannuation, and who are still able to work, is wholly indefensible. In private industry the practice would likewise be objectionable. As a practical matter, in most private industrial pension systems the service requirement is so linked up with a stipulated age that a worker would seldom be able to secure a pension while still in middle life. Some private systems, however, permit retirement after long service, irrespective of age.

The idea has sometimes been advanced that a pension system is intended to assure the worker a period of comfortable ease in his declining years. This conception of a pension system has been vigorously condemned by one writer as follows:

"Employees must be on their guard against those of their leaders who adopt the view that the purpose of a retirement system is to reward faithful servants with a 'chance to rest,' and that the conditions established . . . should be placed sufficiently low so that 'we may get our pensions while we are still young enough to enjoy them.' That is not only wrong philosophy regarding the nature of a retirement system; it is a wrong philosophy regarding life." [1]

The "reward-of-service" theory tacitly admits that workers rendering unusually long service

[1] Lewis Meriam. "Principles Governing the Retirement of Public Employees," p. 399.

have not been fully paid during their active working careers. Under such a theory it is at least incumbent upon the employer to make the assurance of the payment certain; it would also seem that under this theory the reward should take account of all service of special length and not be dependent upon the fortunate accident that the worker shall complete a service period of extraordinary length.

If the "reward-of-service" theory be accepted as a primary reason for establishing a retirement system, there appears to be a far better method of meeting it. This matter is discussed in detail in Chapter V. Certainly this object is not adequately met by the ordinary non-contributory[1] pension system.

Pensions as a means of increasing efficiency

We come now to the third conception of pension systems specified on page 4, namely, their use as a means of increasing efficiency, either by humanely getting rid of workers who have become superannuated, or by stimulating the interest and effort of the active force.

This is one of the primary motives which have led to the establishment of pension systems. A pension system, it is urged, tends to relieve the

[1] See p. 47.

employer of any compunction which he may feel over the dismissal of a worker grown old in his service and now without means, and thus more readily enables him to increase the efficiency of his working force by weeding out those no longer able to perform their allotted tasks. The "drag" of such workers upon production is well known to all industrial executives. It is extremely wasteful to permit a superannuated worker to continue at a task where his inefficiency means a lower output not only for himself, but for all others associated with him in the operation. In some cases, notably in work of a "line" character, it is imperative that such a worker shall not be retained, at least in the particular position. Many establishments have endeavored to meet this difficulty by finding other tasks of a lighter or less exacting character, to which such older workers are assigned. But the opportunities of this sort often are far too few to take care of the increasing number of superannuated workers. The employer has, therefore, resorted to the expedient of a pension system in order to enable him to dismiss such workers without raising any question of injustice or of adverse reaction on the other employees.

This broad underlying phase of the pension movement is suggested by the following state-

ment from the Massachusetts Commission on Old Age Pensions, Annuities, and Insurance.[1]

"The problem of dealing with the aged employee is an urgent one in the modern business world. . . . To carry them on the payroll at their regular employment means waste and disorganization of the working force; to turn them adrift is not humane. In the past, large employers of labor have tried to meet this difficulty in piecemeal fashion by retiring aged employees on pension in certain cases, or giving them light work, each case being provided for separately, on its own merits; now they are beginning to deal with the problem in a systematic fashion, by adopting a uniform method of retirement with pension."

Of all the purposes which have led to the establishment of industrial pension systems this is, perhaps, most easily justified. In the case of the public service, it is the one paramount justification for inaugurating a pension system. As one writer has said:

"Every reason for establishing a retirement system thus far advanced can be summarized under the single broad heading of the improvement of the public service and, in fact, that is the only

[1] Report of the Massachusetts Commission on Old Age Pensions, Annuities, and Insurance, 1910, pp. 136–137.

It should be noted that two state commissions in Massachusetts have investigated the pension problem. The second was known as the Massachusetts Commission on Pensions, and its report was issued in 1914.

reason why the Government should establish one in its own interests." [1]

Without a retirement system, it is urged, the public official is tempted to continue workers who in private establishments would be dismissed. A special reason for this is that ordinarily a government executive is under no such pressure to "show results" as is the manager of an industrial plant. It is, indeed, notorious that the government service includes many who are incapacitated and superannuated, and whose salaries are in reality little more than pensions, while, in addition, the Government is incurring a heavy overhead expense on their account.

Yet, as a matter of fact, there is grave danger that certain types of pension systems may not result in thus increasing efficiency through the removal of the superannuated. A report of the United States Commission on Economy and Efficiency, submitted to the President of the United States in 1910, indeed, maintained that a non-contributory [2] pension system in the case of government service operated to retain poor employees rather than to keep up the standard of efficiency. It argued that "in case the inef-

[1] Lewis Meriam. "Principles Governing the Retirement of Public Employees," p. 16.
[2] See p. 47.

ficient employee is working under a pension system whereby he is entitled, on reaching a certain age, to retire on a competence, the head of the office will be all the more reluctant to dismiss him before he reaches that age."

The Commission held that a pension system "has exactly the opposite effect where the private corporation is the employer," since the administrative head of the office is in self-defense "obliged to hold up every subordinate to the highest standard of efficiency and to stifle any feeling of humanity or sympathy which might otherwise tempt him to show leniency."

Without attempting to analyze this point in detail, it may be concluded as almost axiomatic that a private employer will have less compunction about dismissing superannuated workers if he knows that their remaining years are provided for by some retirement system than he will have if he knows that they are likely to become objects of charity. The failure of many pension systems to accomplish the removal of superannuated workers effectively often is due to the fact that the system is of a defective type or contains defective provisions, or to faulty administration, rather than to an inherent vice in the principle of the retirement benefit itself.

It may be concluded, therefore, that the prob-

lem of maintaining efficiency by the removal of workers no longer able to perform their tasks should be facilitated by the inauguration of a proper retirement system. As noted later, this alone may not be a sufficient justification for such a system.

Pensions as a means of increasing efficiency of the active force. In distinction from increasing efficiency through elimination of the superannuated, it is often claimed that pension systems increase the efficiency of the active force. As already pointed out, the very fact that superannuated workers are thus provided for may exert a favorable influence upon the active members of the force and increase their good will, and thus perhaps their efficiency as well. Again, to the extent that a pension system relieves the worker during the stress period of life of anxiety over his declining years, he is, it is urged, in better condition, mentally and physically, to perform his daily tasks.

The same view is found in the following statement in the Report of the Massachusetts Commission for 1910:

"The economic gain from the pension system is twofold: it eliminates the waste and demoralization attendant upon the continued employment of old men who have outlived their usefulness;

and it helps to promote industry, contentment, and loyalty on the part of the working force. The pension system aids in solving the difficult problem of stimulating the employees of a large corporation to the highest efficiency." [1]

This argument, while plausible, is open to serious question. In sharp contrast with the view of the first Pension Commission of Massachusetts just cited, it may be noted that the second Commission on Pensions of that state discredited the idea that a pension system was an incentive to efficiency of the active working force and, instead, concluded as follows:

"The Commission finds that only by the retirement of the superannuated does a pension system improve the efficiency of the public service." [2]

Replies received from numerous employers to an inquiry on this point during the course of this study suggest that the inauguration of pension systems was sometimes followed by an increase in efficiency, but they by no means present convincing evidence of this as a general rule.

A representative selection of these views follows:

"We feel that our pension plan is largely instrumental in increasing efficiency."

[1] Massachusetts Commission on Old Age Pensions, Annuities, and Insurance, 1910 Report, p. 138.

[2] Not italicised in original.

"We feel that the pension helps efficiency of service, but it is very difficult to give anything definite in regard to the effect of the pension only."

"We know of nothing which we are doing which has a greater effect on the morale of the organization than our pension system."

"We find that our older employees consider their pension rights in the nature of an insurance, which, no doubt, has some influence in . . . securing their efficiency."

"Operating alongside of our Employees' Saving and Profit Sharing System, our Employees' Benefit Association, and more recently, in conjunction with our Industrial Council Plan of employee representation, it is safe to say that the broad effect of the Pension Plan is distinctly beneficial."

"We do not feel that we can expect it [the pension system] to produce any very noticeable results in the way of . . . efficiency."

"We do not believe that the inauguration of the pension fund has had any effect on . . . efficiency."

That pension systems do not materially increase efficiency of the active force was the conclusion reached by the Industrial Bureau of the Merchants' Association of New York, based upon a study of private pension systems made in 1919.[1]

[1] "Industrial Pensions." Merchants' Association of New York, 1920, p. 30.

Analyzing the replies of fifty-nine employers with respect to the effect on efficiency, the report in question said:

"These replies show that the claim that pension systems bring about increased efficiency by increasing appreciation and loyalty of employees and by eliminating their worries is without much foundation. Nearly twenty per cent of the employers questioned are certain no increased efficiency results, while as many more believe that probably such is the case. Furthermore, very few of the nineteen employers (less than one-third of those replying) who believe that increased efficiency has resulted appear to base such belief on facts and some admit that, while they feel sure the increased efficiency is present, there are no tangible evidences of it.

"This failure to produce increased efficiency can be traced to the fact that, in general, pension systems appeal only to employees who have grown old in their present employment. These employees usually constitute a relatively unimportant part of the entire working force and their habits of efficiency, like all other habits, have become more or less fixed."

In any event, the effect of a pension system on the efficiency of the active force will depend largely upon the terms of the plan, partly upon its certainty from the viewpoint of the employee, partly upon the character of the employee, and very largely upon his age. That it will not be

an important factor in the case of the younger workers is practically certain.

Pensions as a Means of Reducing Labor Turnover

A hope that pension systems will reduce the enormous labor turnover so characteristic of modern industry undoubtedly has been one chief reason for their establishment. Yet on this point it is possible to say with assurance that such systems are disappointing. The testimony of nearly all employers who have introduced pension systems is that the effect upon labor turnover in the case of workers under middle age is small, and often negligible. For workers nearing the retirement age the prospect of a pension apparently is a decided incentive to continuance in the service. But the very fact that workers have remained in a given establishment until such age is of itself evidence that they would be likely to continue if there were no pension system. There is the further practical consideration that the worker past middle age has sufficient inducement to continue merely because of the difficulty involved in finding a new position. The reluctance of Industry to employ men over fifty years of age, or even somewhat under that age, is proverbial.

Statements on this point were obtained from a considerable number of employers. While at

first sight they appear to show a reduction in labor turnover, careful analysis indicates that this was, in nearly all cases, confined to older workers. An official of one large industrial company stated:

"I believe that the restraining influence on labor turnover of the pension system is practically negligible in the case of workers less than fifty years of age."

Other representative statements on this point are given below:

"We believe that this policy, in connection with our death benefit system and safety and welfare work . . . is something of an incentive in holding their loyalty."

"As to the further results of the system, we feel that with those employees who remain with the company for a number of years, looking forward to the possibility of a pension has considerable influence in reducing the turnover, but with more recent employees it has very little of any such effect."

"After a man reaches the age of fifty or so and has been with us for a considerable time, we have no doubt that the pension plan tends to tie him to us. The pension plan, however, has little influence upon the real problem of labor turnover."

"The labor turnover at our mine operations is such that we have felt that the matter of pen-

sions is given very little consideration by our men, except possibly the employees who hold the more important positions."

"We do not believe that group insurance without pension or endowment features, or a pension plan which does not provide for a death benefit in some way, will accomplish very much in the long run, but we are convinced by our experience that a plan under which reasonable death, disability, and pension benefits are provided, will do a great deal to increase the . . . continuity of service."

These statements more or less accurately reflect the general consensus of opinion on this subject.[1]

It may safely be asserted, therefore, that the employer who inaugurates a pension system primarily for the purpose of reducing labor turnover ordinarily will be disappointed. Certainly the prospect of such a result is not sufficient warrant for assuming the burden and expense of a pension system.

Furthermore, some disinterested students of the labor problem hold that a considerable labor

[1] The Report of the Industrial Bureau of the Merchants' Association of New York, previously cited, said on this point:

"As might be expected from the fact that pension systems do not in general create appreciation, loyalty, and efficiency, neither do they develop materially permanence of employment except with the older employees. In this connection it occurs to one that labor turnover is ordinarily very small among middle-aged employees who have worked for a number of years for their present employer."

turnover is by no means undesirable, but even that it is essential in order to enable workers to find their proper niche in industry. The use of pension systems to interfere with the mobility of labor has often been condemned as an attempt to "chain the worker to his job."

Organized Labor has repeatedly objected to private pension systems on this ground, and on the further ground that they have been instituted in order to prevent or hinder unionization. Thus Samuel Gompers, in a statement secured during the course of this study, said:

"Labor does not believe in pensions given by the employer. Old age pensions were established by a number of railroad companies, not for the benefit of their employees primarily, but for the influence they might have on discouraging organization. . . .

"Where an employer establishes a pension system, it can be traced to the hope that it will prevent the organization of the employees into trade unions. There is no case on record where the employees are union men that pensions are paid. It is only in non-union plants or industries that the pension system can be found. . . .

"Another idea behind the payment of pensions is to prevent the enormous turnover in non-union shops where the wages and working conditions are undesirable. The employers believe that the hope of receiving a pension some time in the dis-

tant future will influence the workers to accept low wages and disagreeable conditions of employment. . . .

"Only the autocrats in industry, the employers who fix the wages, hours of employment, and working conditions of the workers, believe in profit sharing as well as pensions. Until the Government itself establishes an old age pension system, labor will insist that pension systems shall be controlled by the workers themselves without any connection whatever with the employers. . . . No system should be devised that will tie men to their jobs, and the object of the pensions when established in non-union shops is to compel them to accept whatever wages and conditions of employment are forced upon them. . . .

"Labor therefore refuses to place in the hands of employers a weapon that can take away from workers at the last moment any benefit that depends upon their servility."

While exception could easily be taken to many of the contentions in this statement, it may be regarded as an illustration of the position of a large section of Organized Labor towards private pension systems.

Pensions as a Means of Disciplinary Control

In many cases, one motive in establishing pension systems has been a desire to control and discipline workers. This is particularly true with

respect to strikes. Many employers have argued that an employee who may lose his pension if he goes on strike, joins a union, or engages in other activities displeasing to the management, will carefully count the cost.

This purpose of pensions has been stated by one writer as follows:

"The pension attaches the employees to the service and thus decreases the liability to strike. . . .

"When employees realize that unsatisfactory conduct may at any time lose them not only their present position, a loss which in such a labor market as ours might be easily made good, but that it entails further the loss of a very valuable asset—the employee's right to a pension—the incentive to good conduct is greatly increased." [1]

This view is clearly reflected in some of the pension plans now in actual operation. For instance, such provisions as the following are not uncommon in "discretionary" plans:

"A pension may be withheld or terminated in case of misconduct on the part of the beneficiary or for other cause sufficient in the judgment of the Board to warrant such action."

"Discontinuance of regular work without permission for any other reason than sickness or ac-

[1] F. A. Vanderlip. "Insurance for Workingmen." *North American Review*, December, 1915.

cident, may at the discretion of the Committee be deemed sufficient cause for the forfeiture of all benefits accruing under this plan."

Here, again, practical experience indicates that any such expectations from a pension system are doomed to disappointment. Strikes have frequently occurred in establishments where pension systems are in force. The experience of railroad companies, several of which have long-established pension systems, is an illuminating example of their ineffectiveness in avoiding labor troubles.

Even if a pension system succeeds in preventing men from going on strike, the fact that they have been deterred from doing so under virtual compulsion may engender an amount of ill feeling which will more than nullify any beneficial effects of the system.

The use of a pension system for disciplinary purposes is, indeed, essentially its use as a club. The pension promise is in effect distorted into a threat. If one purpose of a pension system is to increase good will—and it is difficult to see how this purpose can be absent—certainly this result cannot be hoped for where the system is perverted into an engine of repression, oppression, or discipline.

Much of the hostility on the part of Labor toward private industrial pension systems appar-

ently can be traced to the belief, or fear, that they are likely to be used for such disciplinary purposes.

Squier, in his book already quoted,[1] says on this point:

"That which the more thoughtful of the wage-earners themselves urge against a pension plan is that it restricts, even to the point of prevention, the mobility of labor. . . .

"Another objection more frequently urged by the laboring class against this system is that the employee becomes a sort of chattel property of the employer. The latter is free to discharge him, cut down his wages, or to shift him from an agreeable to an undesirable line of work. He must submit without resistance."

One prominent writer who has criticized the use of pension systems for disciplinary purposes, has characterized "discretionary" systems [2] as "the new peonage." In this connection he said:

"A pension system with such features must either prove a delusive protection or operate as a bribe to induce the wage-earner to submit to a new form of subjection to the corporation. . . .

"Employers seek to justify provisions in the pension systems like those quoted above by the fact that the pension fund is contributed wholly

[1] "Old Age Dependency in the United States," pp. 278–280.
[2] See p. 47.

by the employer. But this fact furnishes no justification. The employer should not be permitted, even at his own expense, to establish a pension system which tends to rob the workingman of his little remaining industrial liberty."[1]

Conclusions as to Proper Purposes of a Pension System

To epitomize the preceding discussion it may be concluded that a private employer is under no compelling moral obligation to provide for the support of his superannuated employees in their old age. Nor can a pension system primarily be regarded as a method of rewarding faithful service, although this purpose may be present. It may further be concluded that the prospect of reducing labor turnover, or of exercising disciplinary control over workers, does not promise results of sufficient importance to warrant the expense of a pension system, while the latter purpose is in many respects inherently objectionable.

It follows, therefore, that the one controlling justification of a pension system from the employer's standpoint is that it will increase efficiency, primarily through elimination of superannuated and incapacitated workers, and possibly by building up a larger amount of good will and interest among the active force. Although

[1] Louis D. Brandeis. "Business a Profession," pp. 75–76.

some of the other purposes discussed are important, they are incidental to the primary object of increasing efficiency.

While in many cases it is doubtful whether such efficiency is attained, this failure may be due to imperfections in the plan or to errors in administration. A sound retirement system should facilitate the problem of dismissing superannuated and dependent workers. There may also be some increase in the efficiency of the active force, but the evidence on this point is by no means convincing.

To the extent that a pension system does actually increase efficiency, it merits most careful consideration.

Increase in efficiency, however, is not in itself a complete justification of a pension system. Not only must a pension system be effective, but it must be inherently sound and equitable, and must not produce consequences injurious to the worker or to society as a whole. In order to determine the facts on these important points, it is essential to take up the discussion by distinctive types of pension systems.

Types of Pension Systems

Before proceeding to this analysis it will be convenient to define briefly the principal types

of private pension systems. These are three in number, as follows:

1. The non-contributory "discretionary" system;
2. The non-contributory "limited-contractual" system;[1]
3. The contributory system.

In pension systems of the first type the cost is, at least ostensibly,[2] borne by the employer, the employee making no direct contribution. The employer, moreover, has complete discretion, not only as to the general provisions of the plan and the amount of the benefit, but also as to the continuance of the system, or even the continuance of a pension which has once been entered upon. Such "discretionary" systems specifically deny the existence of any contractual right on the worker's part and, as a result, provide for no benefit to a worker quitting the service or dismissed before reaching the retirement age. They may, or may not, include a death benefit.

In pensions of the second type the contributions are likewise made exclusively by the employer who, again, retains practically complete discretion except that, once a pension has been

[1] This designation is not in common use, but has been adopted as a convenient one for the purpose of this report.
[2] See p. 53.

entered upon, the employee acquires, to some extent at least, a vested right in its continuance. However, while recognizing a right to the pension itself, systems of this type do not recognize a right to a withdrawal equity by workers separated from the service before reaching the retirement age. Even the right to the pension often is limited.[1]

In contributory systems the cost is divided between the employer and the employee, either equally, or on some other basis. A more important matter is that ordinarily the employee acquires a definite right to the pension,[2] and he also ordinarily has a right to the return of his own contributions (either with, or without, interest) in case of his death or separation from the service prior to the retirement age. Such systems usually provide a death benefit.

A contributory system really includes two elements: one, the contribution of the employee, which represents savings against old age; the other, the contribution of the employer, which is in the nature of a pension proper.

[1] Thus, payment is sometimes limited by the adequacy of an amount set aside as a pension fund, and usually the beneficiary does not have a legal claim as against the employer.

[2] Some contributory systems contain "discretionary" provisions. The right to abandon the plan on return of the employees' contribution usually is reserved.

Contributory pension systems, while common in the public service, and fairly frequent among banking institutions, are very seldom used by industrial establishments.

CHAPTER II

NON-CONTRIBUTORY PENSION SYSTEMS OF THE "DISCRETIONARY" TYPE

THE great majority of private industrial pension systems now in operation are of the non-contributory "discretionary" type: that is, no part of the cost is borne by direct contribution from the employee, while the employer has complete discretion, both with respect to the general features of the plan, and as to the granting, or even the continuance, of the pension in specific instances. Such systems flatly deny the existence of a contractual right.

This type of pension system is based, whether consciously or unconsciously, on the assumption that a pension is a gratuity and, as such, may properly be awarded by the employer at his will. Most discretionary plans, in fact, state that the payments are gratuitous gifts. Clauses like the following are common:

"The allowances are voluntary gifts from the company and constitute no contract and confer no legal rights upon any employee. The continuance of the retirement allowance depends upon the earnings of the company and the allow-

ances may at any time be reduced, suspended, or discontinued on that, or any other account, at the option of the Board of Directors."[1]

"This plan was adopted by the Company, to reward long and faithful service. It is a purely voluntary provision made by the Company for the benefit of its employees, and constitutes no contract, and confers no right of action."[2]

"Neither the creation of this Fund nor any provision or action in reference or relating thereto or the distribution or application thereof or any thing done under or because of or in relation to such Fund, shall be construed as constituting or effecting a contract, expressed or implied, or giving any employee, beneficiary, or other person, any legal rights, or right of action at law or in equity, either before or after pension granted, nor giving any employee the right to be retained in the service, and all employees remain subject to discharge to the same extent as if this Fund had not been created, the creation of such Fund and all provisions made in reference or relating thereto, being purely voluntary on the part of the Company for the benefit of employees who shall have rendered it long and faithful service."[3]

It is imperative at the outset to determine whether this conception of non-contributory pensions as voluntary gifts is sound.

[1] From plan of the Newport News Shipbuilding Corporation.

[2] From Pension and Relief Plan of the Standard Oil Company of Kentucky.

[3] From Pension Board Regulations of the Pension and Relief Fund of Otis Elevator Company.

Are Non-Contributory Pensions Gratuities?

Originally, pensions were mere gratuities. Thus, to quote from one writer:

"The history of the pension as a reward for public service goes back to the Roman Empire. At that period and for many centuries thereafter the pension existed as the gift of a sovereign to a subject for distinguished military service. As time went on the sovereign used his prerogative to reward distinguished achievement in other fields of endeavor, in literature, in art, in philanthropy, but the pension always remained the free gift of a sovereign or of a government to an individual."[1]

"The word pension in the exact sense applies to a payment made to an individual, without his coöperation."[2]

In a strict sense a pension *per se* is primarily a gratuity. Distinction should, however, be made between pensions as voluntary or arbitrary payments by an employer as a charity, and pensions paid under definite *systems,* where the prospect of a benefit is formally held before the worker as an inducement to, or reward for, continued service. As stated in the article just quoted:

[1] Carnegie Foundation for the Advancement of Teaching, Bulletin No. 9. "A Comprehensive Plan of Insurance and Annuities for College Teachers," p. 6.
[2] *Ibid.,* p. 5.

"The personal pension is an ancient institution. The pension system is distinctly modern."

Pensions provided under formal systems, instead of being mere gratuities on the part of the employer, actually may come to a large extent out of the worker's own wage. Many, if not most, students of the pension problem hold that non-contributory pensions are essentially "deferred pay" and that, as such, they have a tendency to reduce the current rate of wages. In fact, some writers hold that there is no such thing as a "free" pension, but that in the long run the cost of non-contributory pension systems is borne by the worker himself.

This issue is a vital one. If a pension is a mere gift dispensed by the employer as a charity, then the latter may be considered free to do as he pleases, just as in the case of any other charity. If, however, a pension is essentially a part of, or inevitably involved in, the wage payment, and merely deferred until a distant date, the situation obviously is quite different and the worker as obviously has rights which cannot justly be ignored.

Non-Contributory Systems as Deferred Pay

The contention that non-contributory systems are essentially deferred pay and, furthermore,

that they tend to reduce the rate of wages, is well brought out in the following statements selected from leading discussions of the pension problem.

Illinois Pension Laws Commission:[1]

"Whether the contribution to a pension fund be taken wholly from the employee's wages or salary, or be paid wholly by the employer, or be derived in part from each, these contributions are in all three cases to be regarded as in reality a deduction from wages or salary. It is the opinion of students of the pension problem that the existence of a pension system in connection with any position of employment is taken into account by both parties to the contract of employment, and that, broadly speaking, wages and salaries actually paid are in due course reduced below what they otherwise would be by the amount of the total contributions from both the employer and employee to a pension fund. The employee will thus pay for his pension by deductions from his wages or salary, whether he is conscious of it or not."

The commission, indeed, went so far as to say that: "It is quite possible that, with a sound fund in existence, the reduction in wages and salaries may in time materially exceed the amount of the total contributions, owing to the advantages of such a fund to the employee under present economic conditions. This consideration

[1] Report of Illinois Pension Laws Commission, 1916, p. 262.

further emphasizes the advantage to the employer of having such a fund established."

The Massachusetts Commission on Pensions accepted the deferred pay principle, holding that "non-contributory pensions inevitably come to be considered as deferred pay, and tend to result in holding down rates of remuneration."[1] A similar position was taken by the Pennsylvania Commission on Old Age Pensions,[2] by the Wisconsin Pension Laws Commission, by the United States Commission on Economy and Efficiency,[3] and by various other official commissions appointed to study the pension problem.

The theory of pensions as deferred pay has been very generally accepted by writers on the subject. Thus, one critic has said:

> "The real incidence of the cost of a retirement system in the case of employees who enter the service after the establishment of the system is placed by economic forces on the employee. The benefits offered by the system become part of his compensation for the services rendered."[4]

[1] Massachusetts Commission on Pensions, 1914 Report, p. 12. (See footnote, p. 30.)

[2] Report of the Pennsylvania Commission on Old Age Pensions, March, 1919, pp. 114-115.

[3] Report of the Commission on Economy and Efficiency Relative to Retirement from the Classified Civil Service of Superannuated Employees, pp. 17-19.

[4] Lewis Meriam. "Principles Governing the Retirement of Public Employees," p. 388.

W. E. H. Lecky:

"All experience shows that where a pension is attached to a particular employment, the rate of wages in it is greatly below what would otherwise have been the market rate." [1]

Henry S. Pritchett, of the Carnegie Foundation for the Advancement of Teaching:

"Salaries are undoubtedly lowered in the course of time by a free pension system, but not to such an extent as to prevent the pension roll from becoming an enormous burden." [2]

"The notion that in the free pension the beneficiary gets something for nothing is an illusion. There is no free pension where the questions of wages and pension are involved together. In the course of a limited number of years such pensions will be adjusted to the salary or wage scale. Under such conditions all salaries will be affected, while only a minority will get pensions." [3]

The deferred pay principle does not necessarily involve a depression of current money wages in order to make that principle operative. If the pension is a substantial inducement for the worker to remain in the service rather than to go elsewhere, then the worker has an equity in the

[1] "Old Age Pensions, A Collection of Short Papers": p. 111.

[2] Carnegie Foundation for the Advancement of Teaching, Bulletin No. 9, p. 8.

[3] Carnegie Foundation, 13th Annual Report, p. 21.

benefit, even though his current money wages have not been depressed. In this case it becomes a part of the consideration for which service is rendered. As one writer has said:

"A pension is as much a part of an employee's real wages as are conditions of labor, guarantee of steady employment, board and lodging (where these are included), medical attention, half pay in case of sickness, and other features not included in the actual money wages received.

"In order to get a full understanding of old-age and service pensions, they should be considered as a part of the real wages of a workman. There is a tendency to speak of these wages as being paid by the company, or, in cases where the employee contributes a portion, as being paid partly by the employer and partly by the employee. In a certain sense, of course, this may be correct, but it leads to confusion. A pension system considered as part of the real wages of an employee is really paid by the employee, not perhaps in money, but in the foregoing of an increase in wages which he might obtain except for the establishment of a pension system." [1]

That a pension is essentially in the nature of deferred pay was repeatedly asserted by the Sub-Committee of the Executive Committee of King Edward's Hospital Fund for London, which made an unusually exhaustive study of the pension

[1] Albert de Roode. "Pensions as Wages." *American Economic Review,* March, 1913.

problem extending over a period of several years. The opinion of the committee is perhaps the more significant because of the popular feeling that money subscribed to a hospital for the sake of the poor should not be used for the granting of pensions. The committee rejected this idea and emphatically endorsed the contention that pensions are in the nature of deferred pay.[1]

Furthermore, testimony by Sir Francis Mowatt before the Courtney Commission of Great Britain showed conclusively that salaries were lower in certain branches of the Civil Service where pensions were paid, than in others where no pensions were paid. Extracts from his testimony follow.[2]

"Now in fixing the scale of pay of your different servants, you necessarily have some regard to the advantage secured by that annuity?

"Yes. . . . I do not think I can go nearer than this—that of late years when we have moved men from the non-pensionable part of the Service to the pensionable part of the Service we have usually reduced their pay by something under ten per cent. But I must explain to the Commission that that does not mean a permanent reduction of ten per cent throughout their service,

[1] Report of Sub-Committee of the Executive Committee of King Edward's Hospital Fund: "Pensions for Hospital Officers and Staffs," p. 5.

[2] "Pensions for Hospital Officers and Staffs," pp. 48-49.

but only this—that so long as they are in the particular class to which they are transferred that deduction is continued. . . .

"My own definition of deferred pay, which perhaps you will allow me to give again with reference to this, is really this, that there is no doubt that a part of a Civil Servant's remuneration is deferred pay in this sense, that it is remuneration which is deferred from his immediate salary, and applied towards granting him a pension. In that sense, and within the conditions of the Service which he joins, that is a deferment from his actual remuneration; if there were no pension he would no doubt get some more pay."

As further evidence of the effect of a pension system upon wages, it may be noted that a railway employee, testifying before the British Board of Trade Committee on Superannuation Funds, stated that "men are deterred from leaving the service on account of their prospective pensions," that is, "if there had been no pensions to look forward to, of course the salaries would need to be higher." This witness also stated that many of his acquaintances "refused to leave the service although they have been offered a larger salary, because of the prospective pensions." [1]

Testimony to the same general effect was given by a government employee before the British

[1] British Parliamentary Papers, 1911, Vol. XXIX, Part 1, p. 93. Quoted by Meriam, p. 20.

Royal Commission on Superannuation and Civil Service. This witness contended that "there is a great deal of Phariseeism" in the argument that a pension system was based upon the fact that government authorities did "not like to see their servants practically in the gutter in old age." He further stated: "So far as a company may be said to contribute to such a fund, I most unhesitatingly assert that it is simply a portion of the man's wages paid year by year for a specific purpose: it is simply paid in another way."[1]

In further support of the contention that the non-contributory pension is essentially deferred pay, the action of the civil servants under the British Crown toward a pension system which had been maintained for a long period of years is often cited: While the British Civil Service plan did not require contributions, 70,000 out of 100,000 employees contended that the pensions were deferred pay, and expressed a preference for a contributory system. Their contention as to the deferred pay issue was sustained by the commission appointed to study the matter.[2]

The contention of these various students of the problem that "free" pensions are essentially de-

[1] British Parliamentary Papers, 1903, Vol. XXXIII, p. 84. Quoted by Meriam, p. 20.

[2] The Carnegie Foundation for the Advancement of Teaching. Bulletin No. 9, 1916, p. 35.

ferred pay was endorsed by numerous pension authorities and economists interviewed in the course of the current investigation.

As opposed to these opinions in support of the deferred-pay principle, it is often held by industrial employers that pension systems have no effect on the current rate of wages. Some employers point to the fact that they do not hold out the prospect of a pension to the worker when he seeks employment, but, indeed, that they forbid their employment executives to refer to the existence of a pension plan. This really has little significance. In a great many cases the prospective employee will know whether or not the company maintains a pension system. Moreover, in private industry it is a matter of relatively small consequence whether the employee considers the pension in making his original wage bargain. He will know of the plan almost immediately after he enters the service, and its appeal will have more weight with him in the event of contemplated separation from the service than when he originally seeks employment. As a matter of fact, there is an inconsistency in regarding new workers as within the scope of a pension plan. Until an employee has passed through the initial period of heavy labor turnover he should not be looked upon as a prospective pensioner.

Other employers having pension plans point to the fact that they pay the prevailing rate of wages. Thus, the executive of one large company having a non-contributory plan stated:

"As far as the practice of this Company is concerned, a pension has nothing of the nature of deferred pay. We pay wages equal at least to the prevailing rate, and in some cases more. A pension cannot in my judgment partake of the nature of deferred pay unless similar pension systems are universally adopted in industry."

A writer on labor questions, in this connection, has said:

"Regardless of pension plans it is obvious that the wage rate will have to approximate the rate prevailing in the community." [1]

If pension systems were in practically universal operation the argument that they are not in the nature of "deferred pay" would have considerable weight. Under the working of competition, however, the establishment paying pensions must meet the prices named by those who are not under this expense. Under such conditions it will be difficult, if not impossible, to pass the cost of a pension system on to the consumer. The cost must, therefore, come out of wages or out of profits. The employer naturally will try to avoid

[1] John A. Fitch. *The Survey.*

a sacrifice of his profits, and in view of the discussion and evidence just presented, it seems reasonably certain that he will, consciously or unconsciously, endeavor to recoup the cost out of the wage.

In this connection the following statement by Dr. A. T. Hadley, of Yale University, may be noted:

> "The payments to the insurance funds must chiefly, if not wholly, come out of wages. Even though they be nominally levied on the employer, he is compelled by competition with other employers not subject to this levy, to reduce in corresponding degree the wages he pays." [1]

A theory of pensions has been advanced to the effect that the employer's contribution to a pension scheme is, at least in part, similar to a charge for depreciation or insurance, and that "in so far as such a payment by the employer is for insurance against that waste and inefficiency in his establishment which would result from retaining superannuated employees and for protection against that discontent which would result from discharging the superannuated without providing for them financially, it is a part of the business expense." [2]

[1] A. T. Hadley. "Economics," pp. 60-61.
[2] Louis D. Brandeis. "Business a Profession," pp. 67-69.

If this theory of pensions be accepted, it might be argued that the employer's contribution, at least in part, is charged into the selling cost of the goods and is, therefore, secured from the consumer rather than out of the wages of the worker.[1]

Conclusions as to Deferred-Pay Issue

Notwithstanding the formidable array of opinion that a pension is essentially deferred pay, in the sense that it depresses the current rate of wages, this principle appears to be subject to important limitations in its practical application. In order that the deferred-pay principle shall actually be operative, it is imperative that payment of the pension shall be reasonably assured. Several of the statements above quoted, to the effect that a pension tends to depress the rate of wages, have reference to governmental pension systems. In the government service, as already emphasized, there is ordinarily no question as to the financial responsibility of the employer, or its continuance as an employer. Moreover, many

[1] It is possible that some of the difference of opinion on this point is due to the fact that many pension systems have been put into effect by great corporations, frequently by those commonly designated as trusts, and that such employers may find it easier to pass the cost of a pension system along to the consumer in the form of increased prices of products than would a smaller establishment. It is doubtful, however, whether the cost of a pension system is, as a matter of fact, entirely charged into the price of the product.

employees enter the government service with the intention of making it a lifework and, generally speaking, feel a relatively high degree of security in their positions.

Where such conditions obtain it seems inevitable that the tendency of a non-contributory pension system will be to depress the rate of wages. In the case of employees in the British Civil Service, moreover, the evidence that this was the actual effect is convincing. The testimony (see p. 39) is specific that the current compensation of employees in certain pensionable classes was appreciably lower than that of other workers of the same grade in non-pensionable positions.

Where, however, the pension promise is surrounded by many conditions, or where the responsibility of the employer or his continuance in business is uncertain, or where the turnover of labor is exceptionally high, it seems doubtful whether a pension system has a significant effect on the rate of wages; this is especially true in the case of workers under middle age. In other words, if the expectation of receiving a pension is extremely vague, then it would seem almost axiomatic that the effect on current wages will be correspondingly modified.

If this view be accepted, it follows that the

actual effect of a pension system in depressing the current rate of pay would ordinarily be much less marked in the case of employees in a private industrial establishment than in the case of public service employees such, for instance, as members of the police or fire department forces, teachers, or even clerical workers.

The amount of the pension benefit has an important bearing on this question. Even if the worker counts with considerable confidence on the receipt of a pension, it will not be a material influence with respect to current compensation unless it is of substantial amount. On the other hand, the promise of a large pension may exert a very appreciable influence.

As the worker's period of service lengthens and as he approaches the retirement age, it seems obvious that the prospect of a pension will have an increasing appeal and will exert a more certain effect upon the current rate of pay. At the same time, also, it seems inevitable that the employer will take this attitude of the workers into consideration in determining wages. He may not reduce wages because of the prospective pension benefit, but he may very naturally hesitate to increase the wages of his older workers in view of the prospect that in the near future he will be

paying them a pension, although they will no longer be rendering him service.

The conclusion seems warranted, therefore, that the theory of deferred pay holds whenever and wherever the pension benefit is counted upon with reasonable certainty by the worker. The actual effect upon the current rate of wages will depend on the amount of the benefit and on the conditions surrounding its payment.

As a corollary it follows that in such cases a worker actually has a right to a pension, at least to the extent that the principle of deferred pay has actually been operative.[1] If he suffers a reduction in wages, or foregoes an increase in wages, because of his confidence that the promised pension actually will be received, he cannot justly be denied that benefit if he has rendered the service.

The non-contributory system of the "discretionary" type flatly denies any such contractual right on the part of the worker. It seems incontrovertible that this denial of a contractual right is a serious if, indeed, not a fatal defect of such systems.

The comparative uniformity with which spe-

[1] It may be noted that the deferred-pay principle does not apply to back service rendered before the introduction of a pension system. For a discussion of this point, see p. 176.

cific waivers of contractual liability are included in pension plans of the discretionary type suggests that their authors are fearful that such a liability might otherwise be claimed.

It has been held by a New York court that an employee dismissed from service has no right to any accrued share of a pension under a system where employees have not contributed to the fund.[1] The Court said:

"Under the regulations established, it seems to me that none of the employees has a vested interest in any part of this fund, even though credited upon his pass book, until the gift is completed by actual payment."[2]

So far as known this question has not arisen with respect to the continuance of a pension once entered upon.

Argument That a Pension Is Pay "Conditionally" Deferred

Accepting the principle of deferred pay as sound within a more or less limited field, there

[1] McNevin v. Solvay Process Co., 32 App. Div. 610; affirmed 166 N. Y. 530.

[2] It may be noted that one writer, in commenting upon this case, has said:

"It might be well to suggest, however, that lack of consideration has always given the equity side of the courts opportunity to step in. It is not improbable that if the matter were ever brought into the courts elsewhere, this particular

remains the collateral question whether the pension is pay unconditionally deferred, so that the worker has at all times an "accrued vested right," or whether it is deferred subject to conditions which vitally affect the worker's equities therein.

That the right of the worker to a pension as deferred pay is a conditional right was asserted by the so-called Courtney Commission of Great Britain, appointed in 1902, which held in substance that

> "a deferred pension is remuneration for services as much as an immediate money payment; but it is, in part at least, remuneration for continuity of service contingently payable on the continuity being maintained during a defined period and not accruing from year to year as an indefeasible interest."[1]

This distinction is one of great practical importance. It obviously has a vital bearing on the right of the worker to a withdrawal equity in the event of his separation from the service.

This contention that the worker's right to a pension as deferred pay accrues only upon the completion of a stipulated period of service is,

part of the plan might be set aside on this ground, as well as on the ground of being against public policy." (Albert de Roode. "Pensions as Wages." *American Economic Review*, March, 1913.)

[1] "Pensions for Hospital Officers and Staffs," p. 47.

however, by no means universally accepted. Thus the Sub-Committee of the Executive Committee of King Edward's Hospital Fund for London, in discussing this point, declared itself "in favor of the principle that every year of hospital service, whenever and wherever given, should be regarded as pensionable with rights vesting accordingly."

While this statement was made with special reference to the hospital services then under consideration, it seems worthy of notice in connection with discussions of private pension systems.

In the article already cited,[1] de Roode likewise held that the right of the worker to a pension accrues from year to year, subject, however, to the condition that the right might begin to accrue only after some stipulated, but relatively brief, period of service. In this connection, he said:

"Considering pensions as a part of wages, the contributions made each year to the pension fund by the Government should be considered, subject to one exception, as deferred wages, payable to the employee upon separation from the service, or to his heirs in case of death. The exception to this general principle should be in the case of the early years of service. A pension is not a mere increase in wages; it is an inducement to continued service. Many persons enter government

[1] "Pensions as Wages." *American Economic Review*, March, 1913.

service as a temporary occupation. The right of the employee, therefore, to the accrued value of his pension should not commence until he has passed what might be called the temporary stage. Roughly speaking, this would be five or six years, and the accrued value of the pension returned to him upon separation would commence with the beginning of what might be called the more permanent service."[1]

If the theory be accepted that a non-contributory pension is pay "conditionally" deferred over practically the entire working life of the employee, it obviously is but a short step from the use of a pension as a promise, or inducement, to its use as a club or threat to compel workers to remain in the service. Some of the objections to a policy of compulsion have already been noted. At least if pressure is to be brought upon workers to continue in the service, it would seem that some far less cumbersome method could be devised than the inauguration of a pension system, with its heavy and uncertain financial burden.

One effect of such an interpretation, as already pointed out, is to produce great inequity as between workers. The worker who is fortunate

[1] It will be noted that this statement had special reference to employees in the public service. However, deRoode held that "pensions for public employees should be considered from the same fundamental basis as pensions for private employees, and they should no less be considered as part of wages."

enough to continue in the service until the retirement age may receive a very large benefit; the much larger number who fall short of the retirement age may, and usually do, get nothing.

Objection to such interpretation of pensions has been taken by one writer[1] on the ground that, just as a life contract between a private employer and an employee would not be sustained in the courts, as being against public policy, likewise a contract would be objectionable, any part of the consideration for which was conditional upon life service to the retirement age. While the objection in question had reference to pensions in the public service, again it seems applicable to private pension systems.

Conception of Pension Systems as a Form of Tontine Insurance Indefensible

One further suggestion relative to the deferred-pay theory remains to be considered, namely, that while a pension may be regarded as deferred pay, it is deferred pay to be invested in a tontine insurance scheme under which, admittedly, many will contribute but only a few benefit. It has been argued by some that so long as the facts are fairly placed before the worker there is no ground

[1] Lewis Meriam. "Principles Governing the Retirement of Public Employees," pp. 420–421.

for criticism if he chooses to take his chances in such a scheme.

One answer to this is that tontine insurance is very generally condemned and, in some states of this country, is flatly forbidden by law. A point of more importance is that employees as a rule do not "choose" to enter upon pension plans. Non-contributory plans clearly are at the employer's option. In most contributory plans, moreover, participation is compulsory, at least for new employees. Practically, therefore, there is no "choice" in either case.

The conception of pension systems as a form of mutual insurance on the tontine plan has been very generally condemned by most students of pension problems. Thus, the Massachusetts Pension Commission, in its 1914 report, said on this point:

"That a pension is a deferred wage implies that the employee has earned a certain wage, part of which is retained by the employer to be paid him on retirement at a stated age. But what becomes, under such a theory, of the deferred wages earned by the employee who leaves the service or dies? He forfeits that part of his wages which has not been paid because deferred, and the forfeited wages become part of a fund from which are paid the pensions of those who survive to the pensionable age. This is in fact a tontine system, which is to-day condemned by the best insurance laws.

"Looking the question squarely in the face, would the employees assent to a pension upon the theory of deferred wages, and consent that part of their wages be held back for the benefit of those who survive to the pensionable age? Upon such a theory the employee, in order to recover his wages, would have to succeed in three things: living to a certain age, remaining in the service until that age, and living beyond that age long enough to get back the value of his contributions."

It should be noted that while this might seem to be an argument against the validity of the deferred-pay theory, in reality it does not discredit that theory, but rather discredits pension systems which do not recognize that theory by definitely assuring some compensating benefit in return for the pay thus deferred.

The New Jersey Bureau of State Research, in discussing this phase of the problem, said:

"The 'tontine' or forfeiture feature was very early introduced, in a somewhat modified form, in the pension funds in France and Great Britain, and from there was copied into the pension funds in the United States. A movement to rid our pension funds of this feature is already on foot. The first steps along this line were taken by Massachusetts, New York City, Pennsylvania, and Connecticut, which have in their new systems supplanted the tontine features by sound insurance and savings features." [1]

[1] "Teachers' Retirement Systems in New Jersey, Their Fallacies and Evolution." Report prepared by Paul Studensky, 1918, p. 64.

While this statement had reference to a contributory system, the objection to the tontine principle is applicable to a non-contributory system in so far as the deferred-pay theory is operative.

Effect of Non-Contributory Pension Systems on Thrift

An objection frequently urged against non-contributory pension systems is that they necessarily tend to discourage habits of thrift. If some one, whether the State or the individual employer, assures a group of individuals that their old age will be provided for, and if that assurance is relied upon, the beneficiaries will, it is argued, have less incentive to provide for themselves. On this point the Massachusetts Commission on Old Age Pensions, Annuities, and Insurance said: [1]

"A non-contributory pension system would weaken the motive to individual saving, and would react unfavorably on character, by lessening the sense of personal responsibility and independence. . . .

"The process of social betterment clearly manifest in the advance of wages, the increase of saving, and the decline of pauperism, will continue, unless the forces that have been bringing it about are undermined by unwise social legislation. . . .

[1] Report, 1910, pp. 301, 308, 309.

By establishing a pension system for the benefit of the few who may perhaps need such aid, the State would strike a blow at the resources of thrift, individual responsibility, and family integrity, which have enabled the great majority of the population to maintain themselves in self-supporting independence. In the impatient effort to help things forward at a faster pace, we should, by attempting an experiment with non-contributory pensions, immediately retard and ultimately reverse the process of social betterment."

A similar opinion, with respect to general old age pensions, was expressed by W. E. H. Lecky, as follows:

"It proposes to teach the whole working population to look to the State, and not to themselves, for the provision for their old age and for the old age of those who might be dependent on them, and thus to destroy the most powerful of all motives to thrift, the very mainspring of productive and self-sacrificing industry. . . .

"Can it be seriously believed that the addition of many millions a year to the state funds directly employed in the relief of poverty will, in the long run, tend to diminish pauperism or to encourage self-reliance and thrift?"[1]

Still another opinion to the same effect may be cited:

[1] W. E. H. Lecky, article in *Forum*, Feb., 1900, pp. 694, 695. Quoted from Report of Massachusetts Commission on Old Age Pensions, Annuities and Insurance, 1910, p. 309.

"The establishment of such a system would constitute a definite abandonment of the hope that any large proportion of the poor will ever be able to provide for their old age, by the improvement of wages and increases in their sense of responsibility." [1]

While several of these criticisms are directed at government old age pensions, nevertheless they seem applicable, at least to a considerable extent, to private pension plans of the non-contributory type. Here again, however, the actual effect of a non-contributory system will largely depend upon the certainty of the pension promise from the standpoint of the worker. Where the State pays a free pension the recipient will count with almost complete assurance upon it and, in such cases, it seems almost axiomatic that he will have correspondingly less incentive to provide for himself. In many private schemes, as already shown, the worker has no such positive assurance as under a state pension. If he counts with only a vague hope on ever receiving a benefit, it may fairly be questioned how far the existence of a pension system will lead him to abandon habits of thrift.

The view is, however, held by some pension critics that one of the greatest handicaps to thrift

[1] "Old Age Pensions: A Collection of Short Papers," p. 12. Quoted from Report of Massachusetts Commission on Old Age Pensions, Annuities and Insurance, 1910, p. 309.

is the difficulty of getting a start, and that this requires so much sacrifice that the worker, especially if he encounters sickness, accident, or other misfortune, is easily discouraged. These critics hold that the prospect of even a very moderate pension may prove an incentive to saving, rather than otherwise.[1]

In considering this argument the fact of everyday experience should not be overlooked, that thrift is often found among those who appear to have the greatest burdens to carry, while extravagance as frequently occurs among those with the fewest responsibilities and apparently the best opportunities for saving.

The argument that lack of thrift is partly due to difficulties in getting a start may have some force, but on the whole the conclusion seems justified that a non-contributory pension system, either in public or private employment, has a tendency to discourage, rather than to stimulate, individual thrift.

Conclusions as to Non-Contributory Systems of the "Discretionary" Type

The preceding discussion shows that there is a conflict of opinion as to whether, and particularly

[1] This point of view is clearly reflected in a discussion of the British Pension Act of 1908 by Henry R. Seager. (Article in *Charities and Commons*, October 3, 1908.)

as to how far, a non-contributory pension system savors of the nature of deferred pay, and still further disagreement and confusion as to how far that system directly affects the current rate of wages. It appears, however, that the following facts are fairly well established:

1. That, where its receipt is considered by the worker as definitely assured, a non-contributory pension is essentially deferred pay and, furthermore, actually depresses the current rate of wages.

2. That, where the receipt of the pension is involved in great uncertainty, or where the amount is very small, its effect on the current rate of wages will be much less marked, and possibly negligible.

3. That the theory that a pension is pay "conditionally" deferred over a long period of years is sharply disputed by some of the best authorities.

4. That the use of a non-contributory pension as a sort of tontine insurance is very generally condemned.

5. That a non-contributory pension system tends to discourage individual thrift.

6. That, to justify itself, a pension system should carry assurance that pensions will be received, in which case the theory of deferred pay becomes operative.

7. That, in such cases, considerations of justice demand that the amount of pay deferred be

regarded as rightfully belonging to the worker and be returned to him under equitable terms, or to his heirs if he dies before receiving it. This would not prevent requirement of a brief period of service before the worker's right should be regarded as vested.

8. That, as a corollary, the "discretionary" type of private pension systems now generally in effect is objectionable, or at least falls far short of a reasonably ideal system.

In effect, a non-contributory system of the "discretionary" type says to the worker:

If you remain with this company throughout your productive lifetime,

If you do not die before the retirement age,[1]

If you are not discharged, or laid off for an extended period,

If you are not refused a benefit as a matter of discipline,

If the company continues in business, and

If the company does not decide to abandon this plan,

you will receive a pension at the age of ——, subject to the contingency of its discontinuance or reduction, after it has been entered upon.

The question immediately arises: What is the justification of a formal pension system sur-

[1] Some systems of this type provide a death benefit.

rounded by so many conditions, waivers, and reservations?

It should be emphasized that the objection to the "discretionary" feature is not the employer's right to abandon or modify the scheme, but the right to make such changes retroactive by denying any contractual right on the worker's part in the pension benefit. Because of the hazards under which business is conducted and the uncertainties involved in the financial phases of pension systems themselves, it is imperative that the right to abandon a pension plan be reserved by the employer, although that right should be exercised only after most serious consideration. But to escape all obligations to those who have for years rendered service with the prospect of a pension in view, is a very different matter.

In this connection the following comment by the Special Committee on Industrial Pensions of the New York Merchants' Association is worthy of special emphasis:

"The corporation is quite right in providing that it reserves the right to alter the rules, or to free itself entirely from the pension obligation. It should be possible always to utilize experience, even to the extent of abandoning the entire undertaking. But such reservations should always be prospective only, they should never take effect retroactively. To provide, as is often done, that

the corporation may wind up the pension plan at any time without fulfilling the promises already made, and then to expect employees to look forward with confidence and order their lives upon the strength of these promises, is certainly inconsistent. When the economic aspect of pensions is considered, such retroactive power of revocation can hardly be considered as moral. . . .

"The employees are entitled to a pension system which has set up an actuarial balance over the years in which any one of them can expect to be affected. If the employee is required to contribute to the pension system, this is only honest. Even if the pensions are apparently the free gift of the corporation, and the economic possibility of this for a considerable period is doubtful, the employee is entitled to look forward with assurance to the pension promise. A pension promise that is not certain involves an uncertain morality."

If it could be demonstrated that the deferred-pay theory did not hold, the various objections to "discretionary" systems on the ground of inequity might be answered by the argument that, in so far as any portion of the workers receive a benefit, such a system is better than none. But if in order to pay benefits to a trifling percentage of the force the current wages of a large proportion are reduced, this argument cannot be sustained.

The conclusion seems forced, therefore, that

even though a pension system be financed wholly by the employer, the worker has rights under it which cannot be denied. This, in turn, leads to the conclusion that systems of the "discretionary" type cannot be justified or, at least, that they do not make a reasonable approach to a practically attainable ideal.

The argument most frequently advanced in favor of non-contributory pension plans of the "discretionary" type is that of simplicity and expediency. One of the chief advantages, in the opinion of many employers, is that complete control lies in the hands of the employer. Many industrial employers who have carefully considered both types and some who are impressed by certain advantages of the contributory system have, nevertheless, concluded that the practical advantages of the non-contributory type of pension plan are controlling.

The following statement by one employer fairly expresses the attitude of many on this point:

> "We discussed very thoroughly the matter of a contributory or non-contributory pension and, due to the complexity of any contributory plan, we decided to adopt the non-contributory plan. . . . Certainly the non-contributory system is far simpler and easier of administration."

In view of the deferred-pay principle already

discussed, however, and of the great inequality which a "discretionary" system produces as between workers who complete a stipulated period of service and the larger number who fall short of doing this, yet spend the greater part of their active lives in the employ of a given establishment, the conclusion seems unavoidable that the issue of expediency is not a sufficient justification of non-contributory systems of the "discretionary" type.

In thus condemning the fundamental principles involved in "discretionary" pension systems, it should be recognized that such systems in actual practice often may be free from some of the abuses by which they are easily subverted. Much depends upon the spirit in which the plan is actually administered. In many cases the actual interpretation of the plan is far more liberal than its letter. Employees who just fail of reaching the retirement age sometimes are permitted to participate in the pension benefit, at least to some extent. In general, however, no benefit is paid under a "discretionary" plan to a worker voluntarily quitting the service, or to one who is discharged. In any case the worker cannot insist upon consideration as a matter of right. It may be noted in passing, moreover, that any disposition toward greater liberality than the rules pre-

scribe carries with it the danger of impairing the financial stability of the scheme.

Furthermore, while in some cases the interpretation of the plan is more liberal than the plan itself, in other cases plans have been arbitrarily changed in such way as greatly to limit the pension benefits.[1]

In spite of the grave objections raised against them, "discretionary" pension systems are in many cases to be regarded as a sincere attempt to solve one of the most complex problems in modern industrial economics. That they have not solved it completely or satisfactorily is no occasion for wholesale denunciation of their authors. Nevertheless, in view of the numerous objections to such systems, and particularly their failure to place the pension benefit on a definite contractual basis, their ready liability to abuse, their inadequacy as a means of meeting the superannuation problem, their great danger of financial shipwreck, it is clearly incumbent upon an employer about to inaugurate a retirement system to endeavor in every practical way to devise some method which will more nearly approach an ideal plan.

In this connection, the following comment is pertinent:

[1] In this connection see p. 167.

"It may be concluded that the efforts which industrial corporations are making for the relief of old age dependency, in view of their paucity and variety, do not give satisfactory ground of hope that the ultimate solution of the problem can be reached in this way. At best their efforts are a makeshift; and their chief value is that of a guideboard along the roadway of the ultimate happy destiny of the army of American toilers." [1]

[1] Lee Welling Squier. "Old Age Dependency in the United States," p. 108.

CHAPTER III

NON-CONTRIBUTORY PENSION SYSTEMS OF THE "LIMITED-CONTRACTUAL" TYPE

UNDER non-contributory pension systems designated in this discussion as of the "limited-contractual" type, the right to receive a benefit where the worker has fulfilled the conditions of the plan and has entered upon the pension roll is definitely recognized, and a pension *once granted* ordinarily cannot be discontinued—at least without provision for meeting any rights accrued by reason of the service rendered.

Ordinarily, however, no right is recognized in plans of this type until the worker has actually gone upon the pension roll. In practically all other respects, such so-called "limited-contractual" systems as actually operative at the present time are similar to plans of a "discretionary" character. They often reserve a wide measure of discretion to the employer as, for instance, the right to discontinue a pension in case of "gross misconduct" or even in case of acts "prejudicial to the interests of the Company."

Typical provisions in pension plans of this sort are as follows:

"When once an annuity has accrued and been granted as a regular allowance, it will be continued for the life of the annuitant, subject, however, to the provisions of this Plan, as it is in effect at the time such annuity is granted." [1]

"The Company reserves its right and privilege to discharge at any time any officer, agent, or employee as the interests of the Company may in its judgment require, without incurring any liability because of any pension not actually awarded; and also reserves its right to amend, alter, or repeal at any time these Regulations or any of them as regards all persons who might otherwise become entitled to claim thereafter an award of pension thereunder, but not so as to affect the right of any person to whom a Service Pension shall have been awarded, to receive all payments of the same promptly and in full." [2]

In one plan of this type provision was made, in case the scheme was abandoned, to transfer the Pension Fund to a trustee, or to purchase annuities from an insurance company, for all persons to whom pensions had been awarded, in amounts equal to such pensions.

These illustrative clauses show that the contractual obligation often is of a very limited character. Moreover, where companies establish dis-

[1] Standard Oil Company of New Jersey Plan.
[2] Westinghouse Electric & Manufacturing Company Plan.

tinct funds segregated from the general funds of the corporation, it is sometimes provided that the pensioner shall have no claim on the company itself, in case the fund is exhausted. While the creation of a fund may really be an additional safeguard for the pensioner, such a stipulation obviously involves a limitation of the company's contractual liability.

The contractual type of non-contributory pension system is not common. The recognition of a definite financial obligation is a burden which many establishments are unwilling or feel unable to assume. Of eighty-seven non-contributory systems in industrial establishments examined in the course of this investigation, only twenty-seven were of the contractual type.

Complete acceptance of the contractual principle would require that a payment should be made to employees quitting the service, or discharged, before reaching the retirement age, such payments to represent the net accrued value of contributions up to that time. Such a payment is often referred to as a "withdrawal benefit" or "return of contributions," but may better be described as a "withdrawal equity," since it is supposed to cover a right accrued because of service rendered, and since in reality it is in lieu of an expected benefit. The inclusion of such a

provision adds very considerably to the cost of a pension plan. In addition, there is a general unwillingness on the part of employers to pay such "withdrawal equities" to workers who are separated from the service, prior to their superannuation, either by their own volition, or by dismissal. A further argument sometimes advanced against such a withdrawal equity is that it may actually place an incentive before the employee to quit the service in order to get the accumulated value of his equity.[1] This, it is argued, not only tends to injure the morale of the service, but is likely to lead to the foolish dissipation of the proceeds by the recipient.

While these objections are entitled to consideration, nevertheless, to the extent that the principle of deferred pay is actually operative, it is difficult to escape the conclusion that where a formal pension system is in effect, workers who have completed a substantial period of service are entitled to such a withdrawal equity, even though contributions have been made in part, or entirely, by the employer.

[1] Such an objection, it may be noted, was raised by the National Civil Service Reform League, as follows: "Any retirement scheme which provides for refunds is very objectionable, because it puts a cash premium upon resignation and offers a great temptation to leave the service to those still young and capable enough to get outside employment." Nat'l Civil Service Reform League. "Superannuation in the Civil Service," N. Y., 1906.

Comparatively few pension authorities go so far as to insist upon this in the case of non-contributory schemes and even under contributory plans it is not customary for a worker who becomes separated from the service before reaching the retirement age to receive any part of the employer's contribution.[1]

Unless provision is made for at least some withdrawal equity in the case of separation, for workers who have rendered a considerable length of service, the non-contributory system of the "limited contractual" type is open to the serious objection that it does nothing for the considerable number of workers who, though spending a large portion of their productive lifetime with a given establishment, do not continue until the retirement age. In so far as the deferred-pay principle is operative, a non-contributory pension system of the "limited contractual" type thus involves the tontine feature, by which many lose and only a few win. It is paternalistic; it can easily be abused for disciplinary purposes; it tends in general to discourage habits of thrift. Furthermore, unless the worker is made to feel that the pension, or the withdrawal benefit, has been earned by him as part of his compensation, he is in effect

[1] In this connection see p. 207.

accepting it as a form of bounty from his employer.

For all these reasons, non-contributory systems of the "limited-contractual" type, though possessing marked advantages over an ordinary "discretionary" system, nevertheless fall far short of fulfilling the requirements of a satisfactory pension plan.

While such a provision for withdrawal equities would remove one of the most serious objections to such a system, it seems reasonably certain that an employer who is disposed to accept the principle of deferred pay to the extent of providing withdrawal equities through surrender of his own contributions can accomplish better results, apparently at less cost, and surely with less uncertainty, by some other method as, for instance, a system of paid-up annuities discussed in Chapter V.

CHAPTER IV

CONTRIBUTORY PENSION SYSTEMS

UNDER a contributory system, as already explained, part of the cost is directly borne by the employee, usually through systematic deductions from his pay envelope. In some private systems of this type the employee bears one-half the cost. In many public service pension systems his share is smaller.

A more vital feature of contributory systems is that they recognize a definite right on the part of the workers, not only to a retirement benefit, but also to a withdrawal equity of some sort. Usually, moreover, a death benefit is provided.[1]

[1] In all contributory systems, experience has shown that eventually the contributors will demand four things: first, that if a contributor is dismissed or resigns voluntarily before the pensionable age, he shall be paid the amount of his total contributions, with interest; second, that if a contributor becomes disabled before the pensionable age, he shall receive either a full or a proportionate pension; third, that if he dies before retirement, his estate shall receive the amount of his total contribution, with interest, or even the amount of both his and his employer's contribution, with interest; fourth, that if he retires upon a pension, but dies before the total amount of his pension receipts equals the amount of his total contribution, with interest, his estate shall receive the balance. (Carnegie Foundation for the Advancement of Teaching. Seventh Annual Report of the President, p. 61.)

Wherever there is reasonable ground for the belief that a contributory system will work, there are other arguments in its favor as against a non-contributory system. A contributory system is far less paternalistic; moreover, it tends to emphasize the value of thrift and presumably to encourage habits of thrift. It may also tend to reduce the financial burden of the employer, but this cannot be laid down as certain, since the fact that employees contribute may lead them to demand a more liberal plan than the employer would adopt if he financed it alone.

Most disinterested students of pension problems have been strongly in favor of the contributory principle, at least in the public service. Representative statements by some of these writers follow.

Henry S. Pritchett, of the Carnegie Foundation:

"Both the logic of facts and the logic of events point conclusively in the direction of contributory pension systems. . . . Such a contributory plan has all the advantages that are lacking in straight pension systems. It encourages thrift; it ensures ultimate payment of obligations by contract; it affords protection to the employee and his family; it provides a pension which the employee can feel is not only earned by long service but is his own by purchase; and, finally, it brings the employer

and employee into mutual relations and gives each a more personal interest and confidence in the other. Where the number of employees is large enough, such a plan, after it has been launched on a sound actuarial basis, may be operated by individual firms; where the number is small, arrangements may be made with insurance companies that are undertaking group insurance of the character described in increasing numbers."[1]

Lee Welling Squier:

"It is urged that, in this country especially, every man is the 'architect of his own fortune'; that the provision against want at any period in life is an individual obligation; . . . that any hope of old age relief from want which is not based upon individual thrift, economy, and foresight decreases efficiency, independence, and manliness; that it is an imposition on the general body of our industrial, thrifty population and an unnecessary and unwarranted addition to the already heavy burdens of the taxpayers to permit the shiftless, lazy, and improvident to expect and rely on protection against want which they themselves have not secured by their own prescience and determination."[2]

Paul Studensky, New Jersey Bureau of State Research, a well-known writer on pension problems:[3]

[1] The Carnegie Foundation for the Advancement of Teaching: Eleventh Annual Report of the President, pp. 118–119.
[2] "Old Age Dependency in the United States," p. 262.
[3] "The Pension Problem and the Philosophy of Contributions," pp. 17–18.

1. "It is a compromise between the foregoing two extreme systems. ('Wholly contributory' and non-contributory systems.) [1]

2. "It harmoniously combines with social insurance and with its principle that every worker must participate in the cost of his protection.

3. "It is a joint undertaking which involves mutual benefits and a two-fold purpose: on the one hand, insuring the employees and their dependents against want in old age, disability, death, and—to some extent—resignation and dismissal; on the other hand, facilitating the elimination of the inefficient from the service and promoting an *esprit de corps.*

4. "It tends to give both sides an equal voice in management.

5. "It promotes a clear distinction between pensions and wages, each side knowing what it pays; it is not intended either to reduce or increase the wages, does not depress the wage, and does not become a 'deferred pay.'

6. "It makes possible the establishment of a financially sound system, the cost of which amounts to ten or eleven per cent or even more, by dividing the cost and requiring the employees to pay five or six per cent, as is being done all over the world.[2]

7. "Concurrently with its adoption for both present employees and new entrants, the old

[1] The designation "wholly contributory" in this case meant a system financed entirely by contributions from employees.

[2] This estimate of cost is applicable to public service rather than to private industry.

'vested rights' and privileges are being swept away.

8. "It is a system which progresses in harmony with social evolution, while the other systems are dying, and it expresses the growing mutual responsibilities which make for a greater democracy and a happier community."

Deferred-Pay Issue under Contributory Pension Plans

One important argument advanced in favor of the contributory plan is that it meets, at least in part, the issue of deferred pay. In the case of contributory pension systems, the amounts contributed by the employee obviously are, in a technical sense, deferred pay, since they are taken out of his current wage to be returned in one form or another at a later date. It by no means follows, however, that the employee's contributions are deferred pay in the sense that they reduce the current *rate* of compensation. As deductions from his current pay they do, of course, reduce the *amount* of wages which he receives at the time. But there seems no reason to assume that they could reduce the *rate* of wages. Instead, under a contributory system the contributions of the employee are, essentially, savings invested in the purchase of an annuity. As one writer has said:

"The employees' contributions could no more be viewed as a reduction of their wage than could any savings which they add to their bank accounts. . . . Of course, the contribution slightly limits one's immediate use of the wage, but it does so in order to insure the employee some satisfaction of his wants in the future.

"It is, therefore, not a reduction of the wage, but a redistribution of it between immediate and future wants." [1]

It has, indeed, been contended that a contributory system tends to *raise* the current rate of wages, on the ground that workers agreeing to make regular contributions would endeavor to secure an increase in their rate of compensation sufficient to offset these.

Whether, under a contributory system, the contribution of the employer tends to reduce the rate of wages equally as in the case of a non-contributory system, cannot be definitely established. It would be easy to argue that the effect would be the same in one case as in the other. Some students of pension problems, however, instead of regarding the employer's contribution under a contributory system as taken out of the worker's wage, look upon it as an established payment in return for which he receives definite advantages

[1] Paul Studensky. "The Pension Problem and the Philosophy of Contributions," p. 14.

in the form of better service, or in facilitating the removal of inefficient workers. On this point the writer just quoted has said:

> "So long as the employee remains in the employer's service the two help the realization of each other's purpose, for if the government by adding a 'pension' to his 'annuity' thereby doubles his protection, the employee, on the other hand, by adding his 'annuity' to the employer's 'pension' thereby doubles the facilities of the government in eliminating the inefficient and improving the service in general. A mutual relationship of tremendous social consequence is thus established between the two." [1]

It might seem that this argument would be equally applicable to non-contributory systems. This view overlooks the important fact that the ordinary non-contributory system recognizes no contractual right. If the employer is not willing to put the pension on a definite contractual basis, he cannot reasonably expect, as a direct result of a pension system, that coöperation from the worker which is essential to increased efficiency of service.

As a rule contributory systems provide for the return of the employee's contribution in the event of his separation from the service prior to reach-

[1] Paul Studensky. "The Pension Problem and the Philosophy of Contributions," p. 14.

ing the retirement age. Few, if any, private pension plans provide for return of the employer's contribution in such cases. It is the opinion of some leading students of the pension problem, however, that the employee separated from the service prior to reaching the retirement age should receive the net amount of not only his own, but of the employer's contribution as well.[1]

It may be noted that one of the leading actuaries of Great Britain, James J. M'Lauchlan, in outlining what he termed a "model fund," provided for the return of the employer's contribution in the event of the death of an employee, but not in the event of his withdrawal from the service. His model fund included the following benefits: [2]

(1) "A pension on retirement at any time after reaching age sixty;

(2) "A pension of a reduced amount corresponding to length of membership, on retirement in impaired health before reaching age sixty, these pensions to be at a uniform rate per cent per annum, on the average salary received during the whole period of membership;

[1] Meriam is one of the few writers who have advocated such return of the employer's contribution in the case of contributory systems. See his "Principles Governing the Retirement of Public Employees," pp. 419–420.

[2] James J. M'Lauchlan. "The Fundamental Principles of Pension Funds": Transactions of the Faculty of Actuaries, Vol. IV, No. 41.

(3) "A return of the employee's own contributions without interest, on withdrawal from the Fund in consequence of leaving the company's service;

(4) "A return of his own contributions and the corresponding contributions of the company without interest, in the event of death before becoming entitled to a pension."

Contributory Pension Systems and Thrift

An objection often raised against non-contributory pensions, as already shown, is their failure to stimulate individual thrift. In this respect a contributory system has a decided advantage. In so far as the employee's contribution is concerned, this is essentially a saving and nothing else. Moreover, it is a systematic saving. In addition to the amounts actually set aside, such systematic contributions may encourage the worker to further saving outside of the pension plan.

The effect of a contributory pension system on thrift has been described in a report of the Carnegie Foundation as follows:

"Thrift is a habit, a mental attitude, that grows with the opportunities for its exercise and the experience of its benefits. The argument that it would be wiser to increase wages and leave to the individual the provision of his own protection is valid for those who already possess the habit of thrift, but breaks down for the large majority

in not providing help for those who may need it most, including the man who suffers early disability. A contributory plan offers exactly the desirable opportunity for developing this habit, and has the further value of promoting a sense of coöperation and mutual responsibility. It furnishes the possibility of saving and investment that is not open in the ordinary commercial channels for men on small fixed incomes." [1]

It is furthermore the opinion of many students of pension problems that the contributory principle gives a pension system a far greater appeal, on the ground that those things are most cherished which involve personal sacrifice or interest. This view is held not only by academic students, but by business executives, several of whom after trying one kind of so-called welfare work after another have stated that they are satisfied that little practical benefit is derived from the mere handing out of gratuities.

Progress of the Contributory Principle

Outside of the field of private industry the contributory principle has steadily gained prestige. Most state commissions which have studied the pension problem have favored the contributory

[1] Clyde Furst and I. L. Kandel. "Pensions for Public School Teachers": The Carnegie Foundation for the Advancement of Teaching. Bulletin No. 12, p. 7.

plan. The First[1] Massachusetts Commission on Pensions emphatically condemned the non-contributory system for state employees, and with equal emphasis recommended the adoption of a contributory system, which it regarded as essentially a form of assisted savings. The Illinois Pension Laws Commission also endorsed the contributory principle, as did the Wisconsin Commission. The Pennsylvania Commission on Old Age Pensions, it is true, took a position in favor of the non-contributory system, but one member of that Commission was an earnest advocate of general old age pensions, and there is a strong suggestion in the report that the opposition to a contributory system was partly a reflection of a fear that this might tend to prejudice the adoption of a general free old age pension.

The pension system introduced by the United States Government in 1920 is of the contributory type, as are many of those in operation in various state and municipal services. The contributory system is likewise generally favored in public service in foreign countries.

One writer has commented upon this drift toward the contributory system, as follows:[2]

[1] See footnote p. 30.
[2] Paul Studensky. "The Pension Problem and the Philosophy of Contributions," p. 13.

"A careful examination of the pension movement abroad and in this country shows that the arguments against non-contributory benefits are constantly gaining in weight and that the government, the employees, and the public at large are looking with increasing disfavor upon non-contributory systems. The tendency of the entire movement leads towards its gradual abandonment."

In the case of public service pension systems, the contributory principle is making such progress that it promises to become practically exclusive in this field. The contributory system tends to meet the objection of the taxpayer that public service employees otherwise are constituted into an especially privileged class. A further practical consideration is that the direct cost to the State or the municipality is reduced.

In private industry the contributory principle has made slower progress, although there is some evidence that here, too, it is gaining in favor.[1]

As yet, however, contributory systems in private industry are not general. They are fairly common in the case of banking institutions which

[1] Thus William R. Willcox, Chairman of the Pension Department of the National Civic Federation, stated on this point: "We have verified information in which it had been represented to us that the recent tendency of private enterprises throughout the world, after a wide period of experience, has been to turn from the straight to the contributory system, the tax on the industry under the former having become onerous." (Address at the Sixteenth Annual Meeting of the National Civic Federation, Washington, D. C., January, 1916.)

have formal pension systems, but not among manufacturing establishments. Of ninety-three plans listed in the Appendix only six are of the contributory type. Broadly speaking, it appears that a contributory plan is best adapted to employees of a high order of intelligence, who receive relatively good pay and who appreciate the advantage of providing against old age, and who look upon the system as a form of old age endowment insurance.

Disadvantages of the Contributory System

Despite the strong *a priori* arguments in favor of a contributory system, it is, in the case of private industry, confronted with numerous practical objections. For some industrial establishments these objections may be fatal to the success of the plan.

In the first place, experience has demonstrated that a contributory system, in order to be successful, usually must be compulsory. The natural inclination of members to let payments lapse is so great that their good will and self-interest cannot be depended upon to keep the plan financially solvent. Payments must be regularly kept up, for it is only by the compounding of payments in early years that the pension obligations of later years can be met.

Again, where labor turnover is high, the administrative burden of maintaining a compulsory system is a serious consideration for employers. Again, with certain classes or racial types of workers the task of inaugurating a compulsory system is so great as to discourage the employer. The introduction of a compulsory system ordinarily will be difficult where women constitute an important proportion of the working force, since comparatively few of these expect to continue in the service until they have reached old age. Still again, there may be legal obstacles in the way. Thus, the laws of some states do not permit of enforced deductions from the employee's wages, in order to meet contributions to the fund.

Under the contributory system there is likely to be a demand for joint management of the scheme by employer and employee.

"A contributory pension system maintained by joint coöperation of an industrial organization and its employees assumes at once a contractual relation. In such a case common justice requires that contributing employees shall have a hand in the management, and that all contributions to persons leaving the service be returned with fair interest added. Corporations have been slow to accept these conditions, not only on account of the uncertain financial load involved in the contributory pensions, but also on account of the

hesitation of most organizations to limit their own independence of action." [1]

Many employers regard this as objectionable. Others, however, feel that the coöperation of employees is a decided advantage, and even essential. An official of a large company which has a contributory system in successful operation stated that the satisfactory results were largely due to the fact that the employees directly participated in the administration of the scheme.

The contributory system, as already shown, places definite contractual obligations upon the employer. This is not an objection, if the benefits are fair. However, under a contributory system, especially if the employer bears a large part of the cost, there is danger that the workers will insist on more liberal benefits as time goes on.

Conclusions as to Contributory Pension Systems

From this brief analysis of contributory pension systems it may fairly be asserted:

1. That under a contributory system the worker's contribution clearly cannot be regarded as deferred pay in the sense of depressing the current rate of wages and, furthermore, that the employer's contribution may not have the same

[1] Carnegie Foundation for the Advancement of Teaching. Seventh Annual Report of the President, p. 59.

tendency to depress the rate of wages as it does in the case of a "discretionary" system. Indeed, the contributory system may tend to force an increase in money wages sufficient to offset the worker's contribution.

2. That a contributory system, if on a sound actuarial basis, with provision for the return of contributions in the event of death, resignation, or dismissal, is largely free from the objections lying against the tontine principle.

3. That a contributory pension system is coming to be regarded as virtually a joint savings scheme, under which the employee benefits through systematic provision for old age, while the employer benefits through greater opportunity to retire superannuated workers, and in other ways to improve the efficiency of his working force.

4. That the system provides a direct incentive to thrift, and that the mere fact that the worker shares in the expense tends to increase his interest in the plan, while at the same time reducing the element of paternalism.

5. That the contributory system nevertheless has numerous practical disadvantages. To insure its own solvency it ordinarily must be compulsory. As such, it is likely to be unfavorably regarded by the worker, although not necessarily so.

6. That where the rate of labor turnover is heavy, such a system involves a greatly increased administrative burden, while the frequent return

of contributions to withdrawing members may impair the financial stability of the plan.

7. That it places the employer under definite financial obligations of a contractual sort, which necessitate a careful administrative supervision and heavy and continuing actuarial expense.

8. That it practically requires participation of the workers in its administration: this is regarded by some employers as undesirable and as likely to lead to undue pressure for increased benefits.

9. That, notwithstanding these disadvantages, the contributory system, because of its recognition of contractual rights, the fact that in a large measure it meets the issue of deferred pay, and that it tends to place part of the responsibility for providing against superannuation upon the individual, is distinctly superior to an ordinary "discretionary" system wherever it can be made practically operative. With certain classes of workers and under some conditions, however, the practical difficulties inherent in the contributory plan in the case of industrial establishments may be insuperable.

CHAPTER V

CUMULATIVE "SINGLE PREMIUM" ANNUITIES AS A SUBSTITUTE FOR PENSIONS

In contrast with the various types of pension systems discussed in preceding pages, attention may now be called to a system of cumulative "single premium" annuities of small amount, issuable year by year as a form of service bonus. Such a scheme is a comparatively new development in the field of retirement systems. So far as known, it has as yet been put into actual operation among wage earners in only a single instance,[1] and the insurance companies interested are still working on the details of their contracts.[2] The plan, however, meets so many objections raised against pension systems that it seems worthy of most careful consideration by employers who are interested in the problem of retiring superannuated or incapacitated employees.

[1] William Edwin Rudge, Inc., New York City, has recently installed such a system.

[2] The Metropolitan Life Insurance Company and the Equitable Life Assurance Society of the U. S. appear to have given chief attention to such an annuity system.

Features of the Annuity Plan

In brief, the plan for such a single premium service-annuity is as follows:

Every worker who has completed a limited period of service with an establishment (say three to five years, roughly covering the period of initial heavy labor turnover) would, for each additional year, receive a paid-up annuity policy assuring him an income of, say, $10 per year, beginning at age sixty-five.[1]

As the length of service extended, the accumulation of such policies would gradually build up an income which at the retirement age would take the place of a pension. Thus, a worker who received a $10 policy each year for thirty years would be assured an income of $300 per year on retirement; those remaining for a shorter period would have a *pro rata* amount.

There would be no conditions attached to the issuance of a policy other than the completion of an additional year of service.[2] The policy

[1] The amount of the annuity and the age limit could, of course, be varied as desired. Furthermore, provision could be made for commencing annuities in advance of the stipulated age, or postponing them beyond it, with a corresponding change in the installments of the annuity. However, if the age limit is lowered, the installments of the annuity will decline in much more rapid ratio, so that it is impracticable to anticipate the retirement age more than a very few years. (See p. 216.)

[2] If desired, annuities could, of course, be issued to cover less than a full year's service.

when once turned over to the worker would be absolutely his property and could not be forfeited.

The annuity policies would be written by a strong insurance company, so that ultimate payment would not depend on the financial condition of the employer.

While, for his protection, the employer could reserve the right to discontinue the arrangement at the close of any year, this would not affect any policies already issued. Such a plan, however, should never be inaugurated unless the employer has satisfied himself, so far as possible, of his ability and willingness to continue it for an indefinite period.

Such an annuity scheme, while accomplishing many things that pensions are designed to accomplish, is sharply differentiated from the ordinary pension system. In the first place, the payment is on a contractual basis from year to year. The fundamental basis of such a cumulative annuity is that continuity of service is worth special recognition and that the employer, therefore, is justified in paying for such service as a business proposition.

The primary object of such an annuity system would be to maintain efficiency by providing an equitable method of dismissing superannuated

and incapacitated employees. Provision against superannuation, although a vital feature of the plan, is collateral to this object and to the principle of rewarding special length of service.

A chief justification of such a system, from the employer's standpoint, is that workers who continue beyond a given limited term save him the expense of labor turnover and also, perhaps, become increasingly efficient. At the same time such a system automatically meets the problem of superannuation, approximately *pro rata* with the length of service rendered by the worker. In the case of workers who had spent practically their entire lifetime in the employ of a single establishment, the total annuity at retirement would be the equivalent of a liberal pension.

General Arguments in Favor of the Annuity Plan

Among the advantages urged in favor of such an annuity system are the following:

1. It is a business proposition. The employer pays for what he gets: The worker receives compensation for the service actually rendered.

2. It eliminates the objectionable "discretionary" feature of many pension systems, since the annuity policy once handed the worker is his beyond recall. It, therefore, cannot be used for disciplinary purposes.

3. It does not interfere with mobility of labor. The worker is as free to seek another position as

though the extra compensation were paid in cash. If he were separated from the service before the end of any given year, he would receive no policy for that year,[1] but this would not affect policies issued for service already rendered. However, precisely because this service annuity is thus paid without reservations, it should bring a response from the worker far greater than would ordinarily be secured under a pension system where the pension promise is involved in many uncertainties and, moreover, may easily be distorted into a threat.

4. While sharply differentiated from a pension, the annuity may provide as effectively as a pension for the old age of the worker.

5. The system is practically relieved of any element of charity. Payment would not depend upon the necessities of the worker, but would be made year by year to all who had rendered an additional year's service.

6. It is equitable as between individuals. Those workers who remain with the company throughout their productive lifetime would receive the largest return. Those who elected, or who were forced, to leave the service, would secure recognition in proportion to the number of years of "annuity service" actually rendered.

7. It facilitates removal of inefficient workers approaching superannuation more effectively than does a pension system. As previously

[1] That is, on the plan here under discussion. It would, as already noted, be possible to draw the plan so that credit would be given for a part of a year's service.

pointed out, under the ordinary pension system a humane executive often is tempted to continue workers still some distance from the retirement age, even though they have become inefficient, since otherwise they might completely forfeit their pension benefit. If, however, such a worker has received a service annuity policy for each year of service rendered, his superior obviously need have less compunction about dismissing him when he is no longer able to do his work efficiently.

8. The system protects the worker against forfeiture of pension benefits in the event of dismissal. The policies already earned are actually in the worker's possession. Under ordinary pension systems, as previously explained, an unfair executive may dismiss workers nearing the retirement age in order to reduce the burden on the pension fund. Not only is this practice unjust, but it is almost certain to nullify much of the good that a pension system might otherwise accomplish. The annuity system, therefore, while facilitating the dismissal of workers no longer efficient, puts less temptation before the management to dismiss them on financial grounds than does an ordinary pension system. It might, however, be found desirable to discontinue the purchase of such policies after some stated age because of their increasing cost.[1]

9. Since the annuity policy would be written by a strong insurance company, the worker is completely relieved of any anxiety as to the responsibility of the employer or his continuance

[1] For a further discussion of this point, see pp. 123 and 124.

in business. The establishment might fail, merge with another concern, or liquidate, but none of these events would affect the value of the annuity policies already issued.

10. The system squarely and effectively meets the issue of deferred pay. While it is desirable that such annuity should be regarded as a form of service bonus, it is possible that on a non-contributory basis, such a system, because of its comparative certainty, would tend even more than a pension system to assume the nature of deferred pay. The annuity system, however, has the great merit that, to the extent that pay is so deferred, its eventual return to the worker is guaranteed year by year.[1]

11. Tangible evidence of the benefit is brought annually to the attention of the worker, thus tending to increase his interest and confidence in the plan. In this respect the annuity system has a great advantage over most pension systems.

12. Such an annuity system tends directly to encourage thrift. This is particularly true if it is on a contributory basis.

13. The system can be made contributory without compulsion. Defections from the plan

[1] To assure return to estates of members dying before retirement, the system should provide a death benefit, either in the policy or by some collateral arrangement.

It should be noted that if such an annuity system were on a contributory basis, the workers contributing would almost certainly demand a death benefit provision. In the opinion of some, as noted on page 204, this could best be handled by a separate arrangement like group insurance. It is the opinion of some authorities, however, that such an annuity system on a contributory basis would require a death benefit provision in the annuity contract itself.

by any one individual do not affect the value of the annuities of others. It, therefore, has a marked advantage in this respect over the ordinary contributory pension plan, which might be wrecked by any considerable number of withdrawals and which, for this reason, usually has to be on a compulsory basis. Moreover, it could easily be arranged that workers who so desired could purchase additional annuity policies on their own account, in any year or years that they were financially able to do this.

14. From the employer's standpoint the annuity system has the great advantage that the cost can be figured much more accurately than the cost of a pension system, and that no further contractual liabilities are incurred. Each year's arrangement is a closed and completed transaction. While a discontinuance of the plan is to be avoided, if possible, nevertheless if it is unavoidable the employer winding up the plan has no long distance liabilities confronting him.

15. In time of emergency the annuities could be omitted for a year or two without wrecking the system. Moreover, it might be possible to make them up in some exceptionally good year or years.

16. There is practically no actuarial expense other than that included in the cost of the annuity policies. Moreover, the administrative burden is very materially reduced, since the great bulk of the work would be conducted by the insurance company underwriting the plan.

It is apparent, therefore, that as compared with

the ordinary pension system such a system of cumulative service annuities has a strong appeal. Against the advantages thus claimed for the system, however, are some disadvantages.

Arguments against the Annuity Plan Analyzed

One objection certain to be raised by some employers is that it is not good business to purchase annuities for men who will leave their employ before reaching superannuation. This is a practical consideration. Out of a group of, say, one hundred members of even the "stabilized" portion of the working force, a considerable number will, for one reason and another, leave long before they become superannuated. The employer justly raises the question whether there is any real advantage to him in purchasing annuities for such men. At first sight the payments represent a needless outgo. If, however, the cost of the deferred annuity is considered as extra compensation earned by continued service, this objection loses its force, since the employer is not injured any more than he would be had he paid the cost of this annuity in the form of a cash bonus. If, on the other hand, the deferred annuity actually comes out of the worker's wage, the employer, as a matter of equity, should be as ready to pay

this portion of the wage as any other. The worker, it is true, might be disposed to object to such an annuity if he felt that it did depress his current cash wage. If, however, the plan were properly presented to him, he might willingly accept such postponement of a part of his wage, in view of the definite assurance that he would eventually get it back, and of the feeling that he was making provision for his superannuation without any element of charity. It would seem that the wisdom of introducing such a plan *on a non-contributory basis* is largely dependent upon the acceptance of this principle by the worker. In other words, the annuity should be recognized by both employer and employee as a special wage, and placed on a *contractual* basis from year to year.

Another objection likely to be raised against the annuity plan here discussed is that the cost of each successive annuity policy for any individual worker steadily increases with his age, and that, in the case of workers nearing the retirement age, the cost becomes very high. Thus, whereas one type of paid-up annuity policy providing for an annuity of $10 commencing at age sixty-five would cost only $10.51 for a worker at age twenty, the cost of such a policy at age sixty

would be approximately $69.[1] On the surface, therefore, the annuity plan contemplates an increased annual payment for those workers whom it is relatively least desirable to retain, namely, those approaching old age.

Against this objection it may be urged that the high cost of annuities at these later ages is appar-

[1] The cost depends, of course, on many things, especially the nature of the benefits included. The following schedule prepared by a large life insurance company illustrates the way in which the cost of successive policies increases with the age of the worker. The costs here given are for a retirement benefit only and do not include a death benefit, or a disability benefit.

TABLE 1. *Schedule of Considerations (for males) at various ages necessary to provide a paid-up annuity of $10 per annum to commence at age 65.*

Age Nearest Birthday	Consideration	Age Nearest Birthday	Consideration	Age Nearest Birthday	Consideration
15	$8.52	32	$17.55	49	$37.94
16	8.88	33	18.32	50	39.85
17	9.26	34	19.14	51	41.89
18	9.66	35	19.99	52	44.07
19	10.08	36	20.89	53	46.41
20	10.51	37	21.83	54	48.91
21	10.97	38	22.81	55	51.60
22	11.44	39	23.85	56	54.51
23	11.94	40	24.94	57	57.64
24	12.46	41	26.09	58	61.05
25	13.00	42	27.30	59	64.74
26	13.56	43	28.58	60	68.78
27	14.15	44	29.92	61	73.20
28	14.77	45	31.35	62	78.06
29	15.42	46	32.85	63	83.42
30	16.10	47	34.45	64	89.37
31	16.80	48	36.14	65	95.53

ent rather than real, since the company will have had the use of the money, and presumably at a higher rate of profit than the rate of accumulation at which annuities are figured. For example, the sum of $16.10, which represents the cost of such a policy for a male worker under one plan at age thirty, would amount to, roughly, $52.50 in thirty years if compounded at four per cent. The cost of such an annuity policy at age sixty, would, as just shown, be about $69. Assuming, however, that the company had been able to earn an average profit of ten per cent on $16.10 over a thirty-year period, the accumulated amount would be about $280, or several times the cost of a $10 annuity for a worker at age sixty. Even if the company earned only six per cent on such a sum, the accumulated value over a thirty-year period would be approximately $92.50. Viewed from this standpoint, annuities purchased for workers at advanced ages actually cost the company less than those purchased at much lower rates when these workers were young.

As a practical matter, however, this argument probably should be disregarded as an employer is likely to be more impressed by the immediate high cost of annuities for such older workers than

by the fact that he has had the use of the money over a long period of years.[1]

A feature of such a cumulative annuity system is that the total income, on retirement, of workers who do not enter the company's service until well along in life may be comparatively small, and less than the allowances paid under some pension systems. Against this, however, is the fact that the annuity plan confers benefits on a much larger number of workers, and that the total amount of the annunity runs approximately *pro rata* with the years of service rendered. Because the system reaches a larger number of workers, the cost may, and presumably will, be greater than the cost of an ordinary "discretionary" pension system, where the benefit will be paid merely to the few who continue until the retirement age.

In some cases as, for instance, especially valuable workers who have served only a few years,

[1] The purchase of such annuities might be discontinued when the worker had reached a given age, say fifty-five years. Such a provision could be justified both on the ground of the immediate cost of such annuities beyond that age, and also on the ground that there is no particular value in continuity of service beyond such an age which would warrant additional compensation.

While, however, the cost of individual annuities purchased prior to age fifty-five would be less than if purchased at a later age, this method might require the withdrawal of a larger total amount of funds from the company's treasury each year, since, in order to provide the worker with an income of a substantial amount on retirement, the individual policies should be for a larger amount than where the purchases were continued up to the retirement age.

it is possible that an employer will feel disposed to pay a somewhat larger annuity on retirement than the terms of the plan strictly demand. To the extent that this is done, the payment loses part of its contractual character and assumes the nature of a gratuity. This practice would, of course, increase the cost of the system. However, there is no reason why such an annuity plan should cost more than a pension plan which provides corresponding benefits. Indeed, as shown later, it may cost less.[1]

An advantage of the annuity system, already noted, is that it is possible to operate it on a contributory basis without making the contributory feature compulsory. Since each year's purchase is a completed transaction in itself, defections from the plan, while reducing the aggregate benefit of the individual withdrawing, would not prejudice the benefits of those who continue. It has been urged, however, that the contributory principle would be greatly hampered, if, indeed, not defeated, because of the rapidity with which the cost of individual annuities increases as the age of the worker advances. For instance, a worker at age thirty might find no difficulty in meeting one-half the expense of an annuity costing at that age, say, $16, but might be quite un-

[1] See p. 191.

able to meet one-half the cost of a similar annuity at age sixty when the rate would be, say, $69.

There seems to be little doubt that for workers approaching the retirement age this steady and rapid increase in cost often would be too heavy a burden and would place a strong temptation before them to withdraw from the scheme.

One method of meeting this difficulty is to provide that the worker shall not be required to contribute at any time more than some fixed sum, or, say, one-half the cost of the *first* annuity purchased in the series; that is, all of the increase in cost from the time the worker came into the plan would be borne by the employer, in addition to an amount representing one-half of the cost of the first annuity.[1] Such a provision could easily be justified on the ground that, as the worker's period of service lengthens, he saves the employer an increasing amount because of reduced labor turnover, and that it is only equitable that the employer should recognize this by bearing a larger share of the cost of the annuity policy.[2]

[1] This would mean that if the first annuity, say at age forty, cost $25, the employer would pay $12.50, while for a similar annuity costing $69 at age sixty, he would pay $56.50, the employee's share remaining unchanged throughout the period at $12.50.

[2] Or, if as suggested above, the purchase of annuities were discontinued at age fifty-five, this would reduce the immediate cost to the worker, since prior to that age the cost of annuities is less. Under such an arrangement the drain on the worker

The further objection sometimes has been raised against such an annuity system that its cost would tend to increase, because workers would be induced to remain in the service longer than would otherwise be the case. This in reality is no objection at all, because continuity of service, so long as the worker is efficient, is precisely what the employer desires. If the plan results in increasing the length of service, he can afford to pay, at least up to some age limit.

It should be emphasized that the objection sometimes raised against a withdrawal equity in the case of a pension system, on the ground that workers will quit the service in order to secure the benefit and spend it for some needless luxury, can readily be avoided in an annuity system by the insertion of a provision in the policies to the effect that they cannot be surrendered for cash. Such a provision seems highly desirable from the standpoint of the worker's real interest. Indeed, such a deferred annuity policy ordinarily would not carry a cash surrender provision.

Still another objection has been made against the annuity system that many workers, owing to change of employment, would receive only a very few annuity policies, and would be careless in

would come in the prime of life, which ordinarily is the best time for him to make provision against old age.

keeping track of these, so that the "lost policy" problem would be a source of considerable difficulty. There can be no doubt that this objection has some force. This should, however, be reduced in proportion as such a system was in general operation: that is to say, while a worker who received only two or three policies might not be careful to preserve them if he never expected to receive any more, he would have a distinct incentive to take care of them if he expected to receive others like them from the next establishment in which he was employed.

Summary and Conclusions

All these, however, are matters of detail which do not have a vital bearing upon the merits of the plan. In view of the fact that such a system provides with certainty for payments; that it affords something like equal justice to all workers *pro rata* with service rendered; that its cost per individual worker also tends to run somewhere nearly *pro rata* with length of service; that it squarely meets the issue of deferred pay; that it has no strings, reservations, or implied threats; furthermore, that it can be made contributory on a voluntary basis, it would appear that such a method of meeting the retirement problem has many attractive features. At least it would seem

that the system should be most carefully studied by all employers who are disposed to introduce some systematic method of dealing with the problem of retirement.

Such an annuity system would have an increasing appeal in proportion as its adoption became general among industrial establishments. Under a general adoption of the system benefits would not be terminated by change of employment. Instead, each year of service wherever rendered (except for the trial or waiting period) would be rewarded with an annuity policy. Therefore, with such a system in general operation, the great body of industrial wage-earners would be making some systematic provision against old age, whereas the ordinary pension system provides, broadly speaking, for only a handful. Consequently, such a system, if in general use, should go a long way toward solving the problem of old age dependency among industrial workers. Furthermore, each employer would feel under no obligation to do more than his *pro rata* share.

Perhaps the most important question is the effect of such a cumulative annuity system upon the morale of the worker himself. If the annuity policies should be regarded by the recipients as mere gratuities, there is grave reason to fear that the system might accomplish more harm than

good. In the long run, no class can accept a gratuity from another class without accentuating class distinctions. Unless, therefore, this annuity plan can be shown to be less objectionable on this score than the ordinary pension system, its adoption would be a matter of very doubtful wisdom.

If, however, the worker is made to feel that the annuity policies received each year have been earned by him by his continued service, and are not a gift, there would seem to be no reason why the system should undermine his self-respect. It seems entirely practicable to place the system on such a plane. Even on the non-contributory plan such an annuity policy should not constitute a gratuity, for it is on a contractual basis. If it actually represents compensation, in addition to the "going" rate of wages, to cover a special quality of service—continuity—it is essentially a special wage. If, on the other hand, because of the deferred-pay principle, it operates to depress the current wage, it clearly is not a gratuity.

Any difficulty on this score would largely be removed if the worker could be induced to contribute, if not half, at least a portion, of the cost of each year's annuity, or to purchase additional annuities from his own funds. The employer could justify the requirement of a contribution on

the ground that it is a primary duty of the employee to provide for his own old age. On the other hand, the employer could justify his own contribution to such a plan as a matter of business, on the ground that workers who thus continued in his employ saved him expense, because of the consequent reduction in labor turnover, and that the system enables him to meet the problem of superannuation, while, by giving the worker assurance of support in old age, it may tend to increase his contentment and efficiency.

Final judgment as to the wisdom of inaugurating such an annuity system will depend, to a large extent, on the broad question whether it is not better to throw responsibility for support in old age entirely upon the worker, even though, as a matter of fact, he frequently will have to resort to public charity. Some employers, moreover, are of the opinion that it is desirable to limit the contractual relationship between employer and employee, so far as possible, to the single question of wages, and that the inclusion of collateral issues increases the likelihood of friction.

From the standpoint of Labor, as clearly shown, it has frequently been urged that what the worker wants is a maximum wage rather than collateral benefits, such as insurance or pensions. If all workers actually were provident, it would be dif-

ficult to challenge this attitude. The practical difficulty, already emphasized, is that, regardless of the wages paid, a considerable number of workers will arrive at old age in a condition of dependency, so that the employer is still confronted with the superannuation problem. In many cases, therefore, it becomes a question of deciding between some formal retirement system or an informal policy. The advantages and disadvantages of an informal policy are discussed in the following chapter.

CHAPTER VI

AN INFORMAL PENSION POLICY VERSUS A FORMAL SYSTEM

Many employers who keenly feel the problem of providing for the superannuation of their workers and who desire to do something to meet it have preferred to take any action in a wholly informal way, varying the amount of the payment in individual instances according to circumstances. In many cases this practice has come about naturally, without much consideration of the merits of a formal system. In other cases, however, decision to rely on an informal policy has been reached only after careful study of the pension problem and of the merits of a formal system of some sort.

Thus, one employer who has devoted a large amount of study to the question, and who has served on a State Pension Commission, said:

"We have no rigid or definite pension system. We do, however, have a more or less informal pension policy, under which aged workers are taken care of according to their need.

"I am positively of the opinion that a pension cannot be claimed by an industrial worker as a right. At the same time it is good business for an organization like ours to take care of its superannuated workers, not on the ground of kindness or charity, but on the practical ground that it increases the good will of the working force. I believe, moreover, that good will is increased to a greater degree by an informal method of pension than by a rigid system where pensions are paid more or less without regard to the merits of the persons receiving them. I think it is a mistake to make any stir over the fact that pensions are paid. The recipients themselves are the best of advertisers, and the fact that the company takes care of its superannuated workers will become known to the entire force in a very effective way.

"In my judgment, pensions should be based on the merits or needs of the individual pensioner, and not as a reward for long service. Where a pension is paid because of length of service it becomes in effect a deferred wage and is bound to be so considered. The inevitable tendency will be that the pension will be taken account of by the wage-earner in making his wage bargains. This I regard as undesirable.

"The pensions paid by our establishment have been paid only after a very careful canvass of the situation in particular cases. The aim has been merely to give a sufficient amount to enable the recipient, with any other income which he or she may have, to live on the basis of a reasonable minimum of comfort. If, for instance, it is known that the worker has accumulated some funds, or

has some other means of income, the pension is made very small. In other cases it is more liberal. In some cases pensions have been increased in recent years to allow for the increase in cost of living. On the other hand, in two cases pensions have been reduced."

Several other employers, after carefully studying the pension problem, have thus far decided against introducing a formal system. Some of these doubtless have an informal pension policy.

Among advantages claimed for an informal policy as against a formal system are:

1. Complete freedom from contractual obligation.

2. Avoidance of the issue of deferred pay. Since pensions would in no individual case be assured, the worker would not be disposed to accept a reduced rate of compensation.

3. Greater discretion as to the amount and conditions of the benefit, and thus better control of the cost.

4. Freedom from demands for increased benefits.

5. Greater freedom in hiring workers of advanced years; under a formal system there would be a tendency not to take on such workers.

6. Greater good will value. Benefits distributed under an informal policy are, it is urged,

likely to be more appreciated than where they are counted upon long years ahead under some formal plan, and where, when received, they may be looked upon as disappointing.

7. In years of stress the benefits can be modified without causing as much dissatisfaction as would result from a change in a formal plan.

Among disadvantages urged against an informal policy are:

1. That in a large establishment it is difficult to get into sufficiently close touch with the workers to ascertain their needs accurately.
2. That the administrative burden of considering the merits of individual cases is unduly heavy.
3. That payments become a pure charity and thus tend to humiliate the worker, and to accentuate class distinctions between employer and employee.
4. That the informal policy has a very narrow appeal and consequently brings little response from the members of the active force.
5. That an informal policy in effect discriminates in favor of the shiftless and improvident workers, as against the thrifty.
6. That the benefits are likely to be inadequate.

7. That the distribution of benefits is likely to be influenced by favoritism of executives whose opinions must largely be depended upon, and that discrimination and dissatisfaction may thus be created.

8. That a large concern may lose in prestige, on the ground that it is not keeping abreast of the times if it does not have a definite retirement system.

The force of these various arguments will depend to a considerable extent on conditions in the individual establishment. Thus, in an organization with a large number of plants and with tens of thousands of workers, where even executives of the second or third rank may not come in direct contact with the employees, it would be necessary under an informal policy to throw much responsibility on subordinates. In these cases there is a very strong likelihood that a lack of uniformity will result. In a smaller organization, or one where the plant managers are in close contact with the workers, on the one hand, and with the Board of Directors, on the other, the difficulties on this score are less.

From the standpoint of direct financial outlay, an informal policy has an advantage over a formal system, since to a considerable extent the

cost can be controlled by the management. If, however, this results in retaining inefficient workers on the payroll, the saving in direct cost may be more than offset by a loss in efficiency. Moreover, even under an informal policy, the benefits must be fairly substantial and the cost of the scheme must bear some reasonable relation to the number of workers needing assistance at retirement.

The advantage of an informal policy in permitting the hiring of old men is apparent. There can be little question that it is far better to provide jobs than to provide pensions. While in many industries there is an indisposition to hire men over fifty-five years of age, others find that they can advantageously use men much older than this. If, however, such an establishment adopts a formal pension system, it will be much less likely to hire old men, and this even though it definitely announces that such workers will not be allowed to go on the pension roll. The management will be fearful that some of these older workers will, as a matter of fact, eventually have to be pensioned, while the great body of workers will take the ground that pension benefits should go to those who spend the greater part of their lives in the service of the company. There will,

therefore, be pressure to discourage the hiring of men of advanced age.

Of the objections to an informal policy, one urged with special emphasis is that there is likely to be serious discrimination in the distribution of benefits, either through deliberate favoritism on the part of subordinate executives, or through inability to determine with any reasonable accuracy the conditions affecting particular individuals. Yet in this respect a formal system of the "discretionary" type seems to offer little advantage over an informal policy. As previously pointed out, one type of executive may keep on the payroll, until he reaches the retirement age, a worker who really should be dismissed, while another may dismiss a worker amply able to perform his task, either to reduce the pension expenditure or for other reasons.[1]

The objection that pensions under an informal policy become a mere charity is regarded by some as vital. Others, however, regard them not as a charity but as a means of building up good will. Under a pension system of the "discretionary" type the benefits are made to appear as a gratuity or charity and, moreover, as a charity of an osten-

[1] In the public service the danger of favoritism is far greater. Indeed, an informal policy is not a practical method of dealing with the superannuation problem in government service.

tatious sort. Yet, as a matter of fact, as clearly shown in Chapter II, they may actually be paid for by the worker. In the case of an informal policy there is no reason why the payment should thus assume the nature of deferred pay to the extent of depressing the current wages, since very few workers will ever receive a benefit and since no worker can count with assurance on receiving one.

Where an informal policy is used, the employer should be extremely careful not to hold the prospect of a pension before his employees in any definite way, since, to the extent that he does this, there is danger that it will come to be relied upon and thus assume the nature of deferred pay. Instead, his attitude should be that provision against superannuation is the duty of the individual worker. Under an informal policy, it should be understood that the pension is in the nature of good will, and is in no way a contractual arrangement.

One practical disadvantage of an informal policy, although not inherent, is that the management will be disposed to estimate the probable cost by some rule of thumb, only to find in a short time that the outlay is running far beyond expectations. It is important, therefore, that the management, in fixing the broad lines of such a policy,

recognize clearly that the outlay will to a greater or less extent reflect the actuarial features of a formal system, particularly in respect to a continuing increase in cost over a long period of years.[1] This difficulty need not be a serious one in the case of small establishments, provided estimates are frequently revised. In very large establishments, however, this question may easily prove an embarrassing one under an informal policy.

Some objections to an informal policy as compared with a formal plan were outlined by the Industrial Bureau of the Merchants' Association of New York as follows:

"The pension system gives the employee growing old in his employment an assurance of a definite income after retirement, while the informal method gives such an employee only the hope that the employer will have appreciated his services sufficiently to reward him to some extent. The difference to the faithful employee who is growing old is very great indeed.

"Undoubtedly the average employee prefers to retire under the provisions of a regular pension system rather than through the munificence of the employer. Pension payments are considered to be only what is due the employee—a normal part of his return which he has earned by faithful and long service; informal pensions, even if operated with the greatest tact and kindliness on the

[1] See p. 157.

part of the employer, savor much of charity to the employee. Surely no employer who so appreciates the value of long and faithful service in an employee that he will make a substantial retirement gift, would knowingly prefer to make it under circumstances which are disagreeable to the recipient.

"Most pension systems state that the employer is under no legal obligations whatsoever, yet no reputable concern would consider stopping pension payments to employees. Under an informal method, the beneficiary is by no means certain of receiving continued assistance. The management with which the former employee has had intimate association may be superseded by persons who have no special interest in the aged beneficiary.

"In the large industrial concerns where the management is centralized and the workers are numerous and spread through many departments or plants, and where close contact between the management and the men is impossible, the informal method is obviously inadequate. On the one hand, it fails to assure the employees that all of them will be cared for as they are entitled to expect; on the other hand, the work of administering it is too cumbersome. Furthermore, the large corporation finds that it can conduct its affairs efficiently and economically only through uniform methods, the cost of which can be estimated in advance with accuracy. In this respect, the pension plan is superior to the informal method."

While these objections are entitled to respectful

attention, some of them are open to criticism. It will be noted that this statement asserts that "a pension system gives the employee growing old in his employment an assurance of a definite income after retirement." In view of what has been set forth in previous chapters this statement cannot be held to apply to the ordinary pension system of the "discretionary" type. Some of these, indeed, give little more assurance, in reality, than an informal method.

Likewise the statement that "no reputable concern would consider stopping pension payments to employees" is open to question. Certainly the majority of pension plans specifically stipulate that payments may be so terminated. Moreover, where a change in the rules is made, as has been done in some cases, by which the age and service requirements are lengthened, the inevitable effect is to deprive a number of employees of the pension which they would have obtained under the original plan, the prospect of which may have been an important inducement to continuance in the service. Such a change in the rules, while perhaps in accord with the letter of the plan, can hardly fail to seem unjust to the worker who thereby loses his pension.

As to the contention in the statement just quoted that the work of administering an informal

policy in large concerns is too cumbersome, it must be remembered that no pension system operates automatically. Even under a formal system individual cases will have to be passed upon by the pension committee or pension board, while in any establishment there will be from time to time workers who, though not strictly entitled to a pension under the rules, will, nevertheless, for one reason or another, call for special consideration by the pension authorities. In other words, even under a formal plan, there will be a considerable number of special cases which will call for individual attention.

For a concern of moderate size it may safely be asserted that the administrative burden is much smaller under an informal policy than under a formal pension system. The head of a company with several thousand employees stated that under its informal pension policy the Board of Directors were required to give only a negligible amount of time to consideration of pension cases. He further contended that there is no serious difficulty, even in a larger establishment, in getting into sufficiently close contact with the worker to make an informal policy entirely practicable.

Unless the number of workers is so great as practically to compel the adoption of a formal system, the use of an informal policy can largely

be determined by the purpose which the employer seeks to accomplish. Where the primary object is to relieve actual distress of faithful workers who have rendered unusually long service, an informal policy has many attractions. It obviously will not be the equivalent of a formal retirement system recognizing contractual rights. If, however, the intention of the employer is to reward all workers who render an unusual length of service, regardless of their financial condition at the time of retirement, then it is reasonably certain that an informal system will be too inadequate and too cumbersome to meet the needs of a large establishment.

CHAPTER VII

COST OF PENSION SYSTEMS

ALTHOUGH the question of cost obviously is a vital and, indeed, often a controlling consideration in deciding on the adoption of a pension system, it is entirely safe to say that a great majority of such systems have been started without any accurate conception of the ultimate outlay involved. As an inevitable result, as already noted, a large number of pension schemes, both public and private, have come to grief.

The determination of the cost of a pension system for any individual establishment is a highly expert actuarial task and, at best, involves many uncertainties. Expenditures under a pension plan project far into the future and ordinarily increase for a long period, so that the "peak of the load" is not reached until forty or fifty years, or perhaps even more, after the sytem is started.[1] Exact calculations are, therefore, quite impossible. About the only thing that can be said with positiveness on this score is that all worth-while pen-

[1] In this connection see p. 157.

sion schemes are expensive. Obviously, much depends upon the scope of the plan and the character of the benefits provided. Many pension plans include benefits which in a strict sense are not pensions proper, but are in the nature of savings or life insurance. All these features tend to increase the cost.

No reliable estimate of the cost of a pension system in any individual case can be made without most careful study of the particular facts as to the ages of the workers, sex distribution, rates of labor turnover, and various other details. Actuaries are agreed that there is no pension formula capable of general application. The cost of a pension system in one establishment might be very radically different from the cost of an identical plan in another establishment where employment conditions on the surface might seem very similar.

Starting with a given scheme of benefits, however, it is possible to present general estimates of the cost of a pension plan which will afford the employer some rough measure of the probable financial burden involved.

The immediate cost of a pension system will depend on the method of financing. If no provision is made to meet the liability in advance, the cost will be much greater than where a fund is gradually built up on the compound interest

principle. For example, an annual contribution to a pension fund equivalent to two per cent of the payroll should yield an income sufficient many years later to meet pension disbursements that would then be equal to a much larger percentage of the payroll of a force of the same size and general character.

Methods of Financing a Pension Scheme

The method of financing a pension plan is therefore of primary importance. Four principal methods may be indicated:

1. The setting aside at the outset of a fund large enough to provide an income sufficient to meet the pension disbursements.
2. The setting aside of a smaller fund, supplementing this with annual appropriations.
3. Annual appropriations, without a fund, to meet each year's expenditures as they arise.
4. The building up of a fund on an actuarial basis by setting aside such percentage of every worker's pay as actuarial estimates indicate will be necessary to provide the pension. This scheme may be supplemented by a lump-sum fund at the start.

The first of these methods will seldom be practicable. In the case of an establishment of moderate size, the setting aside of an adequate sum

would seriously, if not hopelessly, embarrass the company in its business. Even in the case of exceptionally large and strongly financed companies, moreover, it will be very difficult to make certain that any fund, so set aside, will prove adequate.

The second method is much better, but still uncertain, as there is no assurance that the appropriation of each successive year will not have to be greatly increased.

The third method is highly objectionable, as practically certain to land a pension scheme on the rocks of business depression, or of unforeseen expenditure.

Of all methods the fourth is the one usually recommended by pension authorities where a *formal* system is introduced. It involves extensive actuarial estimates, and a heavy administrative burden, with periodical revisions of the original estimates. This, however, is the price which an establishment setting up a formal pension system must expect to pay. This actuarial burden is largely obviated in the case of a paid-up annuity system.

By this actuarial, or "reserve," method the total fund to be built up is the sum of the amounts necessary in each individual case as indicated by calculations taking account of age, expectancy of life, and various other factors. Such a fund,

therefore, is in theory sound, provided the plan is not departed from. Actually, as shown later, there are so many factors that cannot be anticipated, that even such a scheme must be almost constantly "revalued" in order to assure its solvency.

Under this method the interest accumulation goes a long way towards meeting the final pension obligation. It could be argued that the use of the funds by the company would more than offset this difference. But as a practical matter the argument in the case of a pension system is in favor of the reserve method, even from the employer's standpoint. From the employee's side the advantage is altogether in favor of the reserve method, with the pension funds kept entirely separate from those of the company. Otherwise the prospect of a pension long looked forward to may suddenly be swept away by some acute business depression or other unforeseen contingency.

In the case of a system of paid-up annuities, the worker has complete protection in respect to benefits already earned by previous service. Even with an annuity system, however, it may be desirable to set aside or build up a fund which will yield an income sufficient to meet the yearly cost of annuities.

While the actuarial method of accumulating a fund is extensively used in public service pension

systems, it is too seldom employed in private pension plans. The result is a very rapid increase in the expenditure for pensions which often, and, indeed, usually necessitates increased appropriations, or forces a radical reorganization of the plan.

Outside of the amount of the benefit and the years of service or the retirement age stipulated, the cost of a pension system by any given method of financing ordinarily will be influenced chiefly by the fact whether or not the plan includes withdrawal equities and death benefits. Obviously, a system which does not provide for a withdrawal equity to employees separated from the service prior to the retirement age, or which does not provide a death benefit, will cost less and, indeed, very much less, than a system otherwise similar but under which such benefits are included.

In discussing this feature there frequently has been a tendency to compare the costs of noncontributory with those of contributory systems. It should be emphasized, therefore, that the mere question whether the entire cost is borne by the employer, or is shared between him and his employees, cannot, if all other conditions are the same, affect the actual cost. The question, who pays, is a detail which, while important, does not enter into the actuarial problem except in so far as it may influence the character of the benefits

provided, or the number and class of employees included. The confusion on this point probably has arisen because it happens that non-contributory systems usually exclude withdrawal equities and frequently exclude death benefits, whereas a contributory system ordinarily includes both. This is entirely natural, since, under a contributory system, employees will almost certainly insist upon the right to withdraw their contributions in the event of separation from service, and, moreover, will be disposed to demand death benefits and other benefits which they might not be in a position to demand under a non-contributory system.

Systems without Withdrawal or Death Benefits

As a rough approximation it may be said that a pension system for industrial wage-earners, providing a modest retirement benefit—but with no withdrawal or death benefit—will require an annual contribution of at least two to two and a half per cent of the total payroll at normal rates of wages, in the case of a representative manufacturing corporation of substantial size. It should be emphasized that this cannot be laid down as a specific formula, since conditions peculiar to a given establishment or to a given industry may be such as to require a much larger amount. On

the other hand, it may be that for some establishments a contribution of slightly less than two per cent would suffice, say, for instance, in the case of a concern having an unusually large proportion of women workers, few of whom would ever go on the pension roll. It would seldom happen, however, that a pension system providing only a modest retirement benefit can be maintained on a much smaller annual contribution than two per cent of the total payroll. On such a basis, moreover, it ordinarily would be necessary to make special provision to cover the cost of meeting accrued liabilities.[1]

It is true that several industrial establishments with pension systems in force have found that the outlay during the brief periods that these have been in operation has been considerably less than two per cent and, indeed, even less than one per cent of the total payroll. But it is not reasonable to expect that costs can permanently be held down to such a ratio if the plan is really effective. All well-informed students of the pension problem are agreed that such a small percentage of the payroll will not suffice to provide pension payments over a long period of years, even under a plan which includes no withdrawal or death benefit, and under which the retirement benefit

[1] See p. 172.

itself is of modest size. Moreover, a contribution of two per cent ordinarily cannot be expected to provide pensions for "back service" of the existing force. The cost of pensions for such back service, constituting what is technically known as the "accrued liability," would have to be met either by special appropriation, or by increasing the annual rate of contribution over a period of years. For instance, if a contribution of, say, two per cent were required to meet the future pension liabilities, the fund might speedily become bankrupt if it immediately had to meet pensions for those workers already at, or near, the retirement age. In some cases, such a contribution might cover part of the cost of "accrued liabilities."[1]

Subject to these, and various other, qualifications the statement may be ventured that many industrial establishments of substantial size and normal labor turnover could hope to finance a pension system of this limited sort on an annual contribution of two to two and a half per cent of the payroll. In many cases, however, unforeseen contingencies will compel supplemental contributions to the fund in order to maintain its solvency.

A representative of an engineering organization which has instituted several pension systems has

[1] For a further discussion of this point, see pp. 173, 174.

said: "Rarely is it feasible for a corporation to appropriate in advance a sum sufficient for all pension needs."[1]

Systems Providing for Withdrawal and Death Benefits

As just explained, a pension system providing for withdrawal equities to those members of the force who are separated from the service before reaching the retirement age, or death benefits for those who die before reaching that age, must necessarily cost more than a plan otherwise similar, but under which no such benefits are provided. Such withdrawal equities and death benefits tend, of course, to interfere with the building up of the pension fund under the operation of the compound interest principle.

Broadly speaking, it may be assumed that, for a given establishment, a pension system providing the same retirement benefit as could be secured by a contribution of two per cent of the payroll where no other benefits were promised, but which, in addition, provided for withdrawal, disability, and death payments, will require a total contribution of at least five to six per cent of the payroll, probably more.[2]

[1] Elmer B. Tolsted. *Cotton,* November, 1920, p. 7.
[2] In the case of public service pensions of this type, the cost frequently is greater than six per cent of the payroll, and not

Since the ordinary contributory pension plan does provide these benefits, such an estimate may be regarded as roughly applicable to a pension system of this type. But, as already pointed out, it should be kept in mind that the question whether the system is contributory or non-contributory is not the governing consideration. Such a cost ratio would be equally applicable to a non-contributory system which provided the same schedule of benefits.

Again, it should be emphasized that this is nothing more than a rule of thumb, and cannot be taken as a working formula until verified by actuarial calculations based on the experience of the individual establishment.

It also should be repeated that these estimates may easily be upset by special circumstances. For instance, the inclusion of highly paid executives at liberal rates of benefit might very seriously increase the cost of the plan.[1]

infrequently greater than ten per cent. Oftentimes, however, such systems provide for substantial benefits to widows or dependent children, which add greatly to the cost.

If the death benefit is limited merely to the return of the employees' contributions, the cost might be less than five or six per cent.

[1] An instance is cited of a company where a considerable number of such executives went on the pension roll at one time, with the result that the "curve" of the pension load was thrown radically out of its calculated course. In this case it happened that nearly all of these executives died within a single year, with the result that the curve was speedily brought

In practically all cases it is necessary to revise original estimates at frequent intervals, in order to guard against such departure from them as might eventually involve the scheme in bankruptcy. Failure to take this precaution has been responsible for the collapse of many pension funds or schemes which at their inception apparently were sound. Indeed, it is hardly too much to say that bankruptcy, either actual or constructive, has been the common fate of pension plans. This has been especially true in public service. Most of the systems now in effect in private industry have been in operation for too short a period to test their soundness, but, as stated in an earlier chapter, the financial stability of many of them is exceedingly doubtful.

Even with frequent revision of estimates, there is danger that unforeseen events will upset calculations, and that supplemental contributions will be required unless the benefits are modified. It has been remarked that no gratuitous circumstance comes to the relief of a pension scheme. The accidents and contingencies almost invariably operate against the plan from a financial standpoint.

back to its normal. If, however, these executives had lived to an unusual age, the plan might easily have been permanently embarrassed.

Long-Continued Increase in Pension Disbursements

Mention has been made of the almost invariable tendency of pension disbursements under any formal plan to increase, and to increase for a long period of time.

The public generally is familiar with this principle as illustrated by the pensioning of veterans of the Civil War, under which the disbursements continued to increase heavily long after successively predicted "peaks" had been reached. This experience is largely the reflection of a fundamental actuarial principle, which also holds in the case of private industrial pension systems.

This tendency is well illustrated by Chart 1 giving estimates of future pension disbursements under three plans, as prepared in the office of an organization which has installed several pension systems. These curves may be regarded as more or less typical of the normal course of pension disbursements for a large establishment.

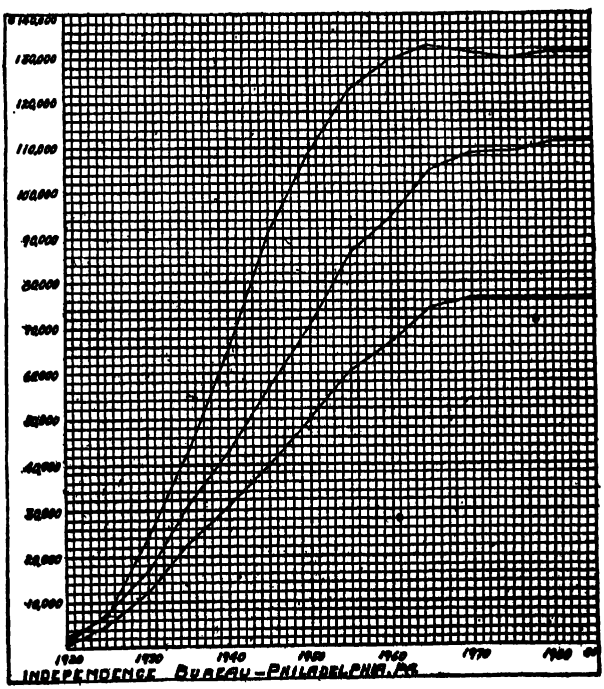
It will be noted that all of the curves in this chart show a fairly rapid and continuous rise over a period varying from forty to sixty years. In only one of the three curves shown is the peak of the load reached earlier than fifty years.

One reason why expenditures thus increase is

that new pensioners are steadily being added before those originally pensioned die. Thus the average expectancy of life for males at age sixty

CHART 1. CURVES SHOWING ESTIMATED COURSE OF PENSION EXPENDITURES OVER A LONG PERIOD OF YEARS UNDER THREE DIFFERENT PLANS.

(Prepared by Independence Bureau, Philadelphia, Pa.)
Published in *Cotton*, November, 1920.



is about fourteen years. If ten persons in a given force are retired each year at age sixty, the pension roll might increase to one hundred and forty

before new additions were offset by deaths. This, however, might require a period of much more than fourteen years. In the meantime workers of younger age at the time the plan was started would begin to come on the rolls in increasing numbers.

The principle involved is illustrated in Chart 2 prepared by an expert for the Massachusetts Commission on Pensions. This chart also clearly brings out the fact that while the provision for present workers is a more immediate problem, it is far less important from the standpoint of ultimate cost than the provision for new entrants into the service.[1]

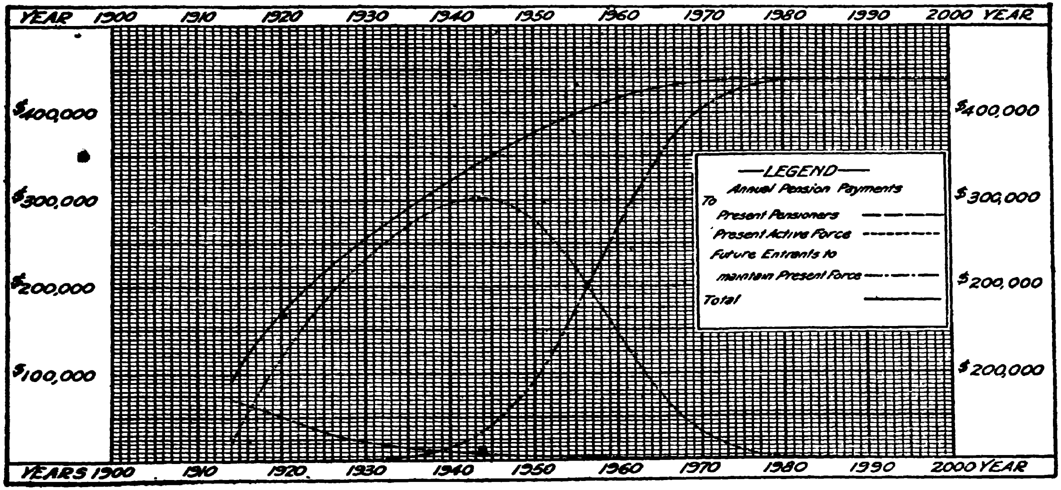
Actual Experience under Private Pension Plans

Experience of Baltimore & Ohio Raiload Company. It is interesting to compare these typical curves with actual experience under one of the oldest pension plans in the United States, that of the Baltimore & Ohio Railroad Company. This plan was established in 1884, on a non-contributory basis, to succeed a Relief Association which had been established a few years earlier. At the time that the pension plan was inaugurated there was turned over to it by the Relief Association

[1] Report of Massachusetts Commission on Pensions, 1914, p. 59.

CHART 2. CURVES SHOWING ANNUAL EXPENDITURES REQUIRED OF THE PERMANENT SCHOOL PENSION FUND OF THE CITY OF BOSTON DURING FUTURE YEARS UNDER EXISTING SALARIES AND WITHOUT INCREASE IN FORCE.

(Prepared by H. D. Brown for the Massachusetts Commission on Pensions.)[1]



[1] Report of the Massachusetts Committee on Pensions, 1914, p. 59.

the sum of $86,000, and the Railroad Company agreed to contribute $25,000 annually, together with an additional sum of $6,000 representing interest accruing on a $100,000 endowment of the Relief Association (provided that this sum was not required for other purposes). Assuming that there was no drain on this endowment, the Railroad's total contribution to the plan would therefore have been $31,000 per year. As a matter of fact, this was the actual contribution for several years.

For the first eight years of the operation of the plan the appropriation by the company was more than sufficient to meet the payments to pensioners, but during the next five years the payments ran heavily in excess of the railroad's contribution which, in 1901, was increased to $75,000 and, in 1905, to $82,550. In a very few years, however, the pension disbursements heavily exceeded this increased contribution and, by 1913, the latter was increased to $146,000; again, in 1914, to $234,000; and still again, in 1915, to $266,000. The rapid increase in payments and in the amount required from the company are shown in the accompanying table.[1]

[1] It may be noted that the amounts appropriated by the company were supplemented by some other miscellaneous receipts from subsidiary companies and from other sources. A statement of these is not essential to the comparison.

Doubtless the exceptionally rapid increase in disbursements in recent years is partly due to the fact that the company's force had been steadily

TABLE 2. *Payments to pensioners and amounts appropriated by the company under Baltimore and Ohio Railroad Company's non-contributory pension plan 1886–1915.*

Fiscal Year Ended	Payments to Pensioners	Amount appropriated by Company
Sept. 30, 1885	$ 7,354	$31,000
" " 1886	18,125	31,000
" " 1887	20,669	31,000
" " 1888	23,438	31,000
" " 1889	24,160	28,000
" " 1890	25,100	30,500
" " 1891	27,894	31,000
June 30, 1892	22,381	24,750
" " 1893	31,954	29,500
" " 1894	34,457	31,000
" " 1895	34,800	31,000
" " 1896	34,726	37,000
" " 1897	46,346	31,000
" " 1898	50,242	31,000
" " 1899	52,117	31,000
" " 1900	49,026	31,000
" " 1901	55,830	75,000
" " 1902	63,143	75,000
" " 1903	64,730	75,000
" " 1904	67,199	75,000
" " 1905	73,322	82,550
" " 1906	82,972	82,550
" " 1907	95,310	82,550
" " 1908	112,356	82,550
" " 1909	129,247	82,550
" " 1910	157,273	82,550
" " 1911	174,746	82,550
" " 1912	193,908	82,550
" " 1913	212,645	146,000
" " 1914	234,292	234,292
" " 1915	266,538	266,538

Note: This table and the data given in the text are taken from a study made for the Carnegie Foundation by Professor G. E. Barnett of Johns Hopkins University. Thirteenth Annual Report of the Carnegie Foundation for the Advancement of Teaching, pp. 110-118.

increased, so that pensions in 1915 were being paid to some workers who were not in the company's employ when the plan was started.

Under the terms of the pension plan the benefits were limited to members of the Relief Association. The number of pensioners at the end of a twenty-five-year period constituted a steadily increasing proportion of the membership of the Relief Association twenty-five years earlier. This is indicated by the following table: [1]

TABLE 3. *Ratio of pensioners to membership in Relief Association twenty-five years earlier under Baltimore and Ohio Railroad Company's pension plan 1883–1891.*

	Membership	Pensioners 25 Years Thereafter		Percentage of Membership
1883	15,989	(1908)	511	3.2
1884	16,848	(1909)	586	3.5
1885	17,002	(1910)	667	3.9
1886	18,297	(1911)	708	3.9
1887	21,226	(1912)	787	3.7
1888	21,211	(1913)	862	4.1
1889	20,081	(1914)	923	4.6
1890	21,722	(1915)	1,036	4.7
1891	21,587	(1916)	1,062	4.9

This experience of the Baltimore & Ohio Railroad Company with its pension plan, therefore, fully bears out the actuarial principle that under a formal pension system disbursements continue to increase over a long period of years.

The marked increase in disbursements recorded

[1] See footnote, Table 2.

under the Baltimore & Ohio plan has not as yet been fully duplicated in private pension systems in industrial establishments in the United States. One reason for this is that such systems in industrial establishments have in most cases been in effect only a few years. There can be little doubt that they will reflect the same actuarial principle of rising expenditures over long periods, unless this is interfered with by arbitrary modifications of the plans.

However, while in the case of industrial establishments there is no such extended experience, the pension expenditures of several of these have already shown the traditional tendency to increase at a rapid rate.

Experience of American Sugar Refining Company. A striking illustration of this is found in the case of the American Sugar Refining Company, as the following record of its pension disbursements shows:

TABLE 4. *Pension disbursements of American Sugar Refining Company, 1912–1920.*

1912 (9½ months)	$15,783.33
1913	37,030.99
1914	45,030.03
1915	55,266.63
1916	83,897.41
1917	96,425.24
1918	109,910.64
1919	120,780.43
1920	113,273.39

The plan of this company was inaugurated in 1912 on a non-contributory basis, and provides for a pension equivalent to one per cent of the average wage or salary during the ten years preceding retirement, multiplied by the years of service. The maximum benefit for any individual is $5,000 a year, and the minimum, after a service of twenty-five years, $20 a month. In several respects the plan is liberal. Of 326 pensioners on the roll at the close of 1920,[1]

4	received	a	yearly	pension	of	$3,000	to	$5,000
5	"	"	"	"	"	1,500	"	3,000
5	"	"	"	"	"	1,000	"	1,500
17	"	"	"	"	"	500	"	900
12	"	"	"	"	"	400	"	500
259	"	"	"	"	"	200	"	400
24	"	"	"	"	"	up	"	200

The decline in the total outlay in 1920 was due to special causes. There is every reason to assume that the "peak" of the pension load is many years distant.[2]

Experience of Otis Elevator Company. The pension disbursements of the Otis Elevator Company for the period 1913–1920 are given on the following page:

While these disbursements do not show a regular graduation with respect to increase, they

[1] The average number of persons employed by the company in 1919 was 9,464; in 1920 it was 9,286.

[2] In 1921, the pension disbursements were almost $135,000.

nevertheless reflect the actuarial principle that disbursements tend to increase rapidly. It may be noted that the increase in 1919 and 1920 was in part due to a voluntary increase in the amount of current pensions, intended to take account of the marked increase in cost of living.

TABLE 5. *Pension disbursements of Otis Elevator Company, 1913–1920.*

Year	Amount paid for pensions
1913	$12,073.02
1914	15,724.97
1915	24,286.44
1916	24,625.36
1917	25,490.43
1918	27,934.33
1919	35,006.96
1920	41,714.19

Of 136 pensioners who went on the pension roll during this eight-year period, fifty-five, or about forty per cent, died. This, of course, had a tendency to keep down the pension expenditure. In all, one hundred and thirty-one death benefits were granted during this eight-year period, involving a total expenditure of $75,223.47. This sum is approximately thirty-seven per cent of the amount spent for pensions proper. The average monthly per capita payment for pensions in 1920 was $43.49, and the average for prior years, $38.04.

Experience of the United States Steel Corporation. Special mention may be made of the ex-

perience under the pension system of the United States Steel Corporation. This plan is of the non-contributory type, providing pensions amounting to one per cent of the average monthly pay received during the final ten years of service, with a minimum of $12 per month and a maximum of $100 per month.

The annual expenditures for pensions under this plan from its inauguration in 1911, to 1920, are shown in the following table, the number of "active" cases on the pension roll at the close of each calendar year also being given.

TABLE 6. *Pension disbursements and number of active cases on the pension roll under United States Steel Corporation's pension plan, 1911–1920.*

Year	Active Cases Dec. 31	Disbursements
1911	1,606	$281,457.37
1912	1,843	358,780.92
1913	2,092	422,815.14
1914	2,521	511,967.90
1915[1]	3,002	659,389.42
1916	3,013	711,130.33
1917	2,933	712,506.65
1918	2,861	709,059.82
1919	2,940	733,707.45
1920	2,969	779,766.60

[1] Plan radically changed in this year. See text.

The average age, average length of service, and average monthly pensions paid under the United States Steel Corporation's plan have been as follows:

TABLE 7. *Average age, average service, and average pension under the United States Steel Corporation's pension plan, 1911–1920.*

	ALL CASES		
	Age	Years of Service	Pension
1911	66.66	30.40	$20.75
1912	63.69	29.14	20.30
1913	63.73	28.82	20.85
1914	63.33	28.76	20.40
1915	62.84	28.34	20.85
1916	62.10	28.41	23.15
1917	62.04	27.71	21.90
1918	62.91	29.42	24.85
1919	63.67	29.04	25.75
1920	64.14	29.53	30.90
General averages....	63.68	28.99	22.30

It will be noted that the total disbursements rose sharply from 1911 to 1916. Doubtless they would have continued to rise had not the Steel Corporation made a radical change in the terms of its plan in 1915, as a result of which the optional retirement age was advanced from sixty to sixty-five years, and the required period of service from twenty to twenty-five years. As the Report of the Pension Fund for 1916 stated: "The changes in the rules had the effect of greatly reducing the number of applicants for pensions on account of compulsory retirement and of retirement at request." [1]

The fact that in the case of this great system

[1] The effect of these changes in the plan is strikingly brought

the curve of disbursements has not followed the traditional actuarial line is, therefore, due to special circumstances. Even with the radical change in the plan, the disbursements have already shown a tendency to resume the conventional upward trend. Thus, after remaining practically stationary from 1916 to 1918, they rose considerably in 1919, and still more in 1920. There can be little doubt that the increase will continue unless a further change is made in the rules.[1]

This change in the rules is a striking illustration of the tendency to amend pension systems, to

out by the following table showing the numbers of employees retired in each year by the method given.

TABLE 8. *Classification of pension cases under United States Steel Corporation's pension plan, 1911–1920.*

Year	Compulsory Retirement	Retirement at Request of Employee	Retirement at Request of Employing Officer
1911	178	298	49
1912	45	257	27
1913	54	259	37
1914	74	360	75
1915	60	467	48
1916	37	63	5
1917	21	39	3
1918	27	38	10
1919	44	57	11
1920	57	64	10

[1] In 1921, the pension disbursements of the Corporation exceeded $947,000.

which attention has already been called in this discussion. Without necessarily condemning such a change, it is obvious that its effect must have been to deny to a considerable number of workers the realization of a pension to which they had looked forward.[1] While necessity may at times not only justify, but compel, rearrangement of pension plans, it is obvious that it is highly desirable to avoid such change by carefully canvassing the probable burden at the outset and drawing up the plan accordingly.

It is proper to point out that the pension disbursements of the United States Steel Corporation, while large, represent only a trifling fraction of one per cent of the payroll, which ranged from $161,400,000 in 1911 to $479,500,000 in 1919. In long established public service pension systems, the pension disbursements sometimes exceed twenty, or even thirty, per cent of the amount of

[1] It may be noted, in this connection, that the plan of the United States Steel Corporation contains the following provision:

"Whenever it may be found that the basis named for pensions shall create total demands in excess of the annual income increased by any surplus deemed applicable by the Board of Directors, a new basis may be adopted reducing the pensions theretofore or thereafter granted, so as to bring the total expenditures within the limitations fixed by the Board of Directors. Notice of such new basis shall be given before the beginning of the year in which it may be decided to put the same into effect."

the payroll. Such a ratio would, of course, be prohibitive for an ordinary industrial establishment. The ratio in the case of the Steel Corporation, however, is extremely low.

This experience of the Steel Corporation's pension plan also strikingly illustrates the point made earlier in this report that the ordinary "discretionary" pension system goes only a small way towards solving the superannuation problem among a given group of industrial workers. The number of pensioners on the roll during the past six years—roughly, 3,000 on the average—is only about one and a quarter per cent of the average total number of employees on the payroll of the Corporation's constituent companies during this period. It is apparent, therefore, that of the great army of workers of the United States Steel Corporation only a trifling percentage enjoy a pension benefit. While the pension system of the Corporation has been in existence only since 1911, many of the largest plants of its subsidiary companies had been operating for long periods of years, so that the number of workers approaching superannuation must have been fairly large at the time the plan was inaugurated. The percentage of pensioners in the case of the United States Steel Corporation is not radically different from the proportion in the case of several other

exceptionally large industrial concerns having pension plans.

So small a percentage of pensioners to employees indicates clearly that while such pension systems may accomplish a measure of benefit, even collectively they make only a pitiable approach toward solving the problem of superannuation among industrial workers. If such provision against superannuation is to be regarded as one of the main reasons for establishing industrial pension systems, it would seem that Industry may reasonably be required to show much more substantial results.

It is unnecessary to present further evidence of the well-established fact that under normal conditions and in the absence of a change in the provisions of the plan, disbursements under a pension system increase at a rapid rate over a long period of years. Because of this fact, it is extremely important that a company establishing a pension scheme estimate as carefully as possible the probable ultimate load. While pension systems often are established because the employer feels the pressing need of making provision for employees already at the retirement age, the real problem of a pension system is not to meet these immediate conditions but, instead, to make provision for the distant future.

Cost of Meeting "Accrued Liabilities"

A vitally important element in the cost of a pension or annuity system is the heavy outlay necessary to provide pensions for the back service of employees who have already completed considerable periods of service, some of whom will almost immediately go upon the pension roll. This problem of meeting the "accrued liabilities," as it is technically called, is one clearly understood by actuaries, but too often overlooked by employers about to inaugurate a retirement system. As one writer has said: "Every plan for maintaining a pension system has sooner or later encountered the difficulties of the 'accrued liabilities,' and upon this rock most pension systems have foundered." [1]

In this connection, the Special Committee of the Merchants' Association of New York well said: [2]

"One of the fundamental problems is so essential that it is entitled to especial emphasis. This is the problem termed that of the 'accrued liabilities.' These are the liabilities with which a pension system starts owing to the previous service of employees when there was no pension system.

[1] Carnegie Foundation for the Advancement of Teaching, Bulletin No. 9, pp. 41–42.

[2] For further discussion of this point see various reports of the Carnegie Foundation for the Advancement of Teaching.

It is always a heavy cost. It must always be met somehow. The handling of it properly requires skillful and scientific management, actuarial knowledge, and pension experience. The directors of a corporation can feel certain that a proposed pension plan is amateurish, and therefore inadequate, unless this problem is exhibited in the clearest light and a satisfactory solution offered. No lucky event ever comes to the rescue of a pension system. Unless it starts right, by careful thought beforehand, it is doomed. The 'accrued liabilities' are of the essence of this forethought."

Obviously, if the contributions made to a pension fund were immediately absorbed in paying pensions to workers already grown old in the service, there would be no accumulation of funds to meet future pensions for the younger members of the force, or for future entrants on the force. It is, therefore, almost invariably necessary to make some special provision for meeting these "accrued liabilities." This can be done in a variety of ways. One of the simplest methods of meeting this charge in the case of an establishment with ample resources is to set aside a fund sufficient to provide pensions for all back service rendered at the time the plan is inaugurated. This permits the annual contributions under the plan to accumulate against the needs of future years. Few establishments, however, could afford to set aside such a fund.

Another method of meeting the "accrued liabilities" is to increase the annual contribution provided for under the plan for a period of years, using the excess over the contribution determined upon as necessary to meet pensions of future years to provide pensions for back service. For instance, if it were decided that an annual contribution of three per cent of the payroll would be sufficient to provide for future service, then for a period of years the annual contribution might be fixed at, say, six per cent, using the additional three per cent to meet the "accrued liabilities."

The cost of meeting these "accrued liabilities" is relatively heavy, since many workers in this group will have put in fairly long periods of service against which no contribution has been made. As an illustration of the burden of this item, it may be noted that the Report of the Special Committee of the King Edward's Hospital Fund cited estimates of actuaries to the effect that in the hospital services then under discussion, composed mainly of salaried workers, the cost of meeting the "accrued liabilities" would amount to approximately a full year's payroll.

Another writer on the pension problem has estimated the cost of meeting the "accrued liabilities" under a public service system financed on

the reserve basis at more than one year's total payroll.[1]

The cost may be substantially less in the case of an ordinary industrial establishment. An estimate by an actuary of a large life insurance company for such an establishment, with a low labor turnover, placed the cost of meeting the "accrued liabilities" in that particular instance at sixty-nine per cent of one year's total payroll.[2] This estimate was of a somewhat hypothetical character and cannot be regarded as typical. It may exceed the percentage necessary in the case of a concern with a high labor turnover. Much depends, of course, on the nature of the benefits included in the plan.

Heavy though the cost may be, the problem of the "accrued liabilities" is one which no employer about to institute a retirement system can afford to disregard. While it might seem at first sight that the employer could take the ground that a pension system need not be retroactive, it has been demonstrated beyond a doubt by experience that an employer who sets up a pension system for younger workers or future entrants, will, as a

[1] Paul Studensky. "Broadening the Scope of Pensions in Private Industry," *New Jersey*, Vol. VI, No. 8.

[2] "Pensions for Employees." E. E. Cammack, Associate Actuary, Ætna Life Insurance Co.

practical matter, have to take care of those workers who have already grown gray in his service. This is so universally the judgment of authorities on the pension problem that it is hardly open to debate.

It is worth repeating, as noted in an earlier chapter, that a benefit for "back service" cannot be claimed by the worker under the principle of deferred pay, but is rather a matter of practical expediency. On this point one critic has well said: [1]

> "The standing of these employees as respects their past service is entirely different from the standing of employees who have been included in the scheme from the commencement of their employment. The holding out of a pension benefit was not an inducement for these men to enter the employment or to remain in it. Hence, so far as past service is concerned, they may be considered to have received full remuneration for services rendered and any pension benefit which may be granted must be in the nature of a gratuity or special reward rather than of a deferred wage. But, in spite of the fact that no provision has been made for these men in the past, it will be generally desired by the employer to make supplementary grants."

[1] J. H. Woodward: Assistant Actuary, Equitable Life Assurance Society of U. S., "Industrial Retirement Systems based on the Money-Purchase Principle." Published in *Economic World*, December 3 and 10, 1921.

Costs under an Informal Pension Policy

Under an informal policy, particularly in the case of a comparatively small establishment, it is possible to exercise considerable control over the cost. Even here, however, costs will tend to increase, since new pensioners will be added to the roll for many years before all of the original entrants die. If an establishment fails to take account of this fact, its costs may speedily become a burden. An employer adopting an informal policy should carefully canvass his force at the outset to determine the number of persons who should be pensioned at once, and should also estimate as accurately as possible the probable number of new entrants for some years ahead, and adjust the maximum pension accordingly. In all cases, liberal allowance should be made for unforeseen contingencies, and it should be kept in mind that the scheme will have to be revised every few years and presumably on the basis of an increased expenditure. It will be found advisable to make a rough calculation of costs for, say, ten years ahead, and check this from year to year with the results of actual experience.

For instance, assume that a company has ten workers whom it desires to pension at once, and that it may reasonably expect to add three more

to the pension roll each year for, say, ten years, and that there will be no deaths among pensioners during this period. Assume, further, that while pensions will vary in individual cases, the average amount will be $200, $300, or $400 respectively. The costs over a ten-year period, assuming that the estimates are not departed from, would run as follows:

TABLE 9. *Illustration of cumulative increase in pension outlay under an informal pension policy on various assumed bases*

Starting with outlay of and annual pension of	$2,000 200	$3,000 300	$4,000 400
First year	$2,600	$3,900	$5,200
Second "	3,200	4,800	6,400
Third "	3,800	5,700	7,600
Fourth "	4,400	6,600	8,800
Fifth "	5,000	7,500	10,000
Sixth "	5,600	8,400	11,200
Seventh "	6,200	9,300	12,400
Eighth "	6,800	10,200	13,600
Ninth "	7,400	11,100	14,800
Tenth "	8,000	12,000	16,000
Total	$53,000	$79,500	$106,000
Average	5,300	7,950	10,600
Fund required at four per cent simple interest, to produce such an income	$132,500	$198,750	$265,000

In all probability there would be a number of deaths among even this small number of pensioners during such a ten-year period. In the

early years of the scheme, moreover, there would be some interest accumulation—provided a fund were actually set aside. On the other hand, there might be an unexpected number of new pensioners.

While such a calculation may be wide of the mark, it should nevertheless be of value in determining for a short period ahead the amount of the average pension to be paid, and the number of new entrants that can be taken care of. In any event, such a calculation should be useful in showing an establishment some things that it cannot reasonably expect to do. For instance, if, in the case assumed, the management feels that the total pension outlay must not exceed $5,000 a year over a ten-year period, it must keep the average pension down. If it finds that the number of new entrants exceeds the estimated number, it must reduce the amount of pension either in all cases or in a sufficient number of cases to keep the average at the amount originally determined upon. In particular, it must avoid paying exceptionally large pensions to a few entrants as, for instance, executives who had been receiving large salaries. Otherwise, its scheme is bound to come to grief. In any case, as already emphasized, the scheme will have to be revised at frequent intervals.

Need of Actuarial Estimates in Establishment of a Pension System

Practically all actuaries and pension experts are agreed that a pension system should be established only after expert actuarial analysis of the probable future costs.

The importance of actuarial estimates was emphasized by the Special Committee of the Merchants' Association of New York as follows:

> "The guidance necessary thus properly to establish a pension system cannot be obtained in the corporation's own staff. The problem is not a mere accounting one; it is of a far more complex and scientific order. The somewhat unfortunate experience in the United States in regard to pensions has been due to the superficial character of the investigation which has preceded the establishment of most pension plans—the mere collection of the rules of a few previous plans framed after similar superficial consideration and selections from them arranged by persons unaware of the fundamental questions involved. Patent fallacies, once started in American pension plans, have thus endlessly perpetuated themselves."

However, even with the best of actuarial advice, forecasts of the ultimate pension burdens are involved in great uncertainty. Indeed, it is obvious that an estimate of future costs where these are subject not only to possible changes in

the character of the personnel, but in rates of wages, in longevity, and in stability of the labor force, can never be anything better than careful estimates. A particular weakness of many actuarial estimates is that they are based on the assumption of a constant force, and a continuance of the existing rates of wages. Such assumptions obviously will not hold in the case of many companies. On the other hand, attempts to forecast the probable increase in the force or the future course of wages clearly must be highly arbitrary and consequently subject to a wide margin of error.

For these reasons, as already shown, it is imperative that the original forecasts be more or less constantly supplemented by new estimates, or "revaluations," as they are sometimes called, in order to prevent the curve of disbursements from departing so far from the calculated normal as to endanger the stability of the plan. It should be understood that these revaluations do not mean necessarily that the original normal can be maintained at the same expense. However, if departures from the normal trend of expenditures as originally calculated can be detected in time, it may be possible to correct them by only a small change in the annual contribution. If this is not done, one of two alternatives must eventually be

faced: either a heavy increase in the contributions, by a lump sum, or otherwise; or else a curtailment of the benefits. Either alternative is, of course, highly disadvantageous.

As a matter of fact, even where expert actuarial advice has been taken at the outset, and where plans have thus been revalued, unforeseen contingencies have more or less frequently arisen which have upset calculations and even jeopardized the financial stability of a pension scheme.[1]

With respect to the fallibility of actuarial estimates the following excerpt from a statement of George King, one of the leading actuaries of Great Britain, is of interest.[2]

"I agree that actuaries cannot possibly predict the future with strict accuracy. There are very many variable elements that have to be taken into account, and there must, therefore, be elasticity to keep the Fund solvent, and frequent actuarial valuations, so that any changes that take place may be dealt with in time, in order that there may be no necessity for very violent

[1] A striking instance of repeated deficits in a large fund, despite fairly frequent actuarial examinations, is furnished by the experience of the British Railway Clearing System Superannuation Fund, as given in the report of the Sub-Committee of the King Edward's Hospital Fund for London. ("Pensions for Hospital Officers and Staffs," pp. 77–81.)

[2] From testimony submitted to Lord Southwark's Committee on Railway Superannuation Funds. Published in "Pensions for Hospital Officers and Staffs." Report by a Sub-Committee of Executive Committee of King Edward's Hospital Fund for London, Appendix.

measures to put matters right. A very striking example, however, can be brought forward to show how even the most cautious forecasts of actuaries may fail to give stability and certainty to a Fund, and that where even extreme rigidity is instituted at the outset there may be fluctuations in the working of such a Fund. Here I would put in the valuation report of the Elementary School Teachers' Deferred Annuity Fund. . . . These contributions are treated as single premiums to purchase deferred annuities, to commence at exact age sixty-five, and the contributions are not returnable under any circumstances, the annuities remaining to the credit of the teachers, even if they withdraw from the service. Thus it appears that the only uncertain elements in these Funds are those of mortality and interest. A table of deferred annuities was prepared under the Act jointly by the late Mr. A. J. Finlaison and the late Mr. W. Sutton, both government actuaries, and they based their calculations on the Government Annuitants', 1883, experience, at a rate of interest which is not known, but which was very low, being less than two and a half per cent. . . .

"It would have been thought that the basis adopted by these eminent actuaries was a thoroughly safe one, and in fact there had been agitation among the teachers, who alleged that the annuities secured were too small, and that the Fund could afford more; that the rate of mortality amongst teachers was higher than amongst the government annuitants, and that, therefore, it was not fair to employ that table for the teach-

ers. The Treasury did me the honor to entrust to me the first septennial valuation; the rate of mortality which had prevailed was investigated, and it was found that that rate was so low that the calculations of the actuaries were altogether stultified, and that there was a large deficiency in each of the Funds—that for the males and that for the females.

"It thus appears that even in the case of a Fund so carefully prepared, and established on what at the outset had every appearance of excessive safety, there may be great surprises, and that the best knowledge and skill may fail to forecast the future."

This difficulty of forecasting the ultimate cost is a consideration which should be carefully weighed before introducing a formal pension system. Even in the case of a long established concern with a stable business and with ample resources, conditions may arise which will make the pension load a heavy burden. Indeed, in many cases this uncertainty as to cost may be a deciding factor against the introduction of a formal pension plan.

In the case of an annuity system of the sort described in Chapter V, the actuarial uncertainties are largely eliminated so far as the employer is concerned. While it is reasonable to expect that the cost of such a system will gradually tend to increase, there should be nothing ap-

proaching the tremendous increase in expenditures which normally occurs under a pension plan.

The fact that such an annuity system ordinarily would be handled through an insurance company is objected to by some employers on the ground that they can finance the plan themselves at less expense. This contention seems of a very doubtful validity. A large part of an insurance company's charge is applied to the building up of a reserve as required by law. Ordinarily an insurance company should be able to do the administrative work involved in an annuity system at less cost than an industrial employer whose force would be unfamiliar with details of insurance practice. A much more important consideration is that any one industrial establishment may encounter unexpected losses through accident, or otherwise, that would wreck the stability of its plan, whereas with an insurance company the losses of a single establishment ordinarily would be insignificant when merged with its total risks. In any event, the responsibility would properly rest with the insurance company.

CHAPTER VIII

COST OF A CUMULATIVE ANNUITY SYSTEM

THE cost of a system of paid-up annuities of the sort described in Chapter V, while depending primarily upon the amount of the benefit and the general conditions imposed, will be influenced in a very marked degree by the rate of labor turnover. As previously explained, such a system ordinarily would not be applicable to workers who had not passed through the period of initial heavy labor turnover, or, in other words, workers who had not already served several years in the company's employ. Even in case of the "stabilized" portion of the working force, as it may be called, however, there is an appreciable labor turnover, gradually becoming less as the average age of the workers, or their average length of service, increases.

Where the rate of labor turnover for such stabilized portion of the working force is normal, the cost of a system of paid-up annuities such as has been described should not exceed the cost of a

pension system providing the same benefits. Indeed, as shown later, it may be less.

Since the annuity policies become the property of the worker year by year, even though he should become separated from the service before reaching old age, the successive delivery of these policies virtually provides for a withdrawal equity or "return of contributions," although this equity is, of course, on a deferred basis. Therefore, the cost of such an annuity system should more closely approximate the cost of a pension system conferring such withdrawal equities than that of a pension system conferring a retirement benefit only.

One thing may be said with reasonable certainty, namely, that the cost of such a system of annuities can be estimated with far greater accuracy than the cost of a pension system. The maximum cost for the first year clearly would be the aggregate cost of purchasing an annuity for each member of the force who completed the required period of service. Such a computation can be made with almost absolute accuracy for the first year,[1] since the ages of the respective workers can be ascertained and the cost of the annuity policy at each age is fixed in the insurance contract.

[1] That is, if made at the close of the year. If made in advance, allowance would have to be made for probable deaths and withdrawals.

The method of calculating the cost of such an annuity system, without provision for the "accrued liabilities," is illustrated by the following table, based on an assumed age distribution of a group of male workers. The policy on which these rates are based provides no death or disability benefit. The annuity payments cease on the death of an annuitant. The cost might be slightly reduced by the return of a small portion of the premiums, or so-called dividends.

If the cross section of the working force by ages and years of service remains constant, likewise the rate of labor turnover, the cost of such a system in its first year, not including the "accrued liabilities," would practically measure the cost in its twentieth year, or any other year. No such constancy of experience, however, can be assumed. The average age and the rate of turnover may fluctuate, while the number of workers in any given age group may vary considerably from year to year. Moreover, the system itself may have a tendency to increase the length of service. In this case the cost would increase, since, as already shown, annuities purchased for workers of advanced ages cost much more than those for young workers. The annual outlay under such a system should, however, increase much more slowly than the annual outlay under a pension

TABLE 10. *Method of computing cost, for first year, of paid-up annuities for $10 each for a group of 500 male workers, all of whom have completed at least five years of service.*

Age	Cost of one $10 annuity	No. workers in each group	Cost for each group
25	13.00	7	91.00
26	13.56	8	108.48
27	14.15	8	113.20
28	14.77	12	177.24
29	15.42	11	169.62
30	16.10	17	273.70
31	16.80	12	201.60
32	17.55	10	175.50
33	18.32	18	329.76
34	19.14	19	363.66
35	19.99	18	359.82
36	20.89	14	292.46
37	21.83	18	392.94
38	22.81	17	387.77
39	23.85	19	453.15
40	24.94	16	399.04
41	26.09	20	521.80
42	27.30	17	464.10
43	28.58	13	371.54
44	29.92	17	508.64
45	31.35	15	470.25
46	32.85	16	525.60
47	34.45	14	482.30
48	36.14	14	505.96
49	37.94	12	455.28
50	39.85	13	518.05
51	41.89	17	712.13
52	44.07	11	484.77
53	46.41	11	510.51
54	48.91	14	684.74
55	51.60	10	516.00
56	54.51	6	327.06
57	57.64	8	461.12
58	61.05	7	427.35
59	64.74	8	517.92
60	68.78	5	343.90
61	73.20	1	73.20
62	78.06	9	702.54
63	83.42	8	667.36
64	89.37	4	357.48
65	95.53	6	573.18
Totals.............		500	$16,471.72

system, where the immediate expenditure is smaller, but where the ultimate expenditure many years later often becomes vastly greater. As a matter of fact, the cost of an annuity plan may remain fairly constant over a long period of years.

In brief, while under such a system of annuities the cost may tend to increase from year to year, it should be possible to estimate the maximum cost for several years ahead with reasonable accuracy. Moreover, if the cost increases more sharply than was anticipated, policies could be taken out for smaller amounts without wrecking the financial value of the scheme to the worker.

The question arises whether the practice of paying up such annuities in full each year is not needlessly expensive, in view of the fact that a considerable number of policies will be purchased for workers who will become separated from the service long before reaching the retirement age. It has been argued by some that a much less expensive method would be to take out an annuity policy for whatever amount it might be desired to pay on retirement at some given age—say age sixty-five—and distribute the cost evenly over a long period on a "flat rate" basis, letting the interest accumulations on the early payments largely provide the fund from which the annuity

would ultimately be paid. This point has been made by various critics of the paid-up annuity plan.

The apparent advantage of interest accumulation under such a "flat-rate" annuity is, however, offset by the fact that under the paid-up plan the first policies can be purchased at a cost not only much less than the cost of those purchased later in the series, but at much less than the average or "flat-rate" cost of the entire series. Therefore, if both policies provide for a withdrawal equity, the cost to the company on the single premium basis would be less than the cost under a "flat-rate" system, because many policies issued to workers who withdraw will have been purchased at relatively low cost.

In this connection, the following statement by an actuary of a large insurance company may be cited:

"You ask as to the relative cost to the employer of a series of single premium paid-up deferred annuities as compared with the cost of a level premium deferred annuity. . . . Assume an employee now age twenty-five for whom it is intended to provide a pension at sixty-five; also this pension is to be $20 per annum for each year of service. This could be purchased in two ways: (1) by means of a series of single premiums for

paid-up deferred annuities of $20 each to be entered upon at age sixty-five; or (2) by means of a level annual premium for a deferred annuity of $800 to be entered upon at age sixty-five.

"Under (1) the annual cost would commence at a small amount for a young employee and increase each year as the age increased. Under (2) the cost would be a level amount from year to year and would not increase.

"If the employee is allowed under both systems the accrued value of the contract at the time of withdrawal, the cost under the second system will be materially greater because of the heavier rate of withdrawal at the earlier ages.

"If no withdrawal benefits of any kind are allowed to the employee, the two systems are mathematically equivalent in their costs to the employer, the only difference being that under (2) the apparent cost would be less because the funds are paid in earlier and earn interest."

Problem of "Accrued Liabilities" under an Annuity System

With an annuity system of the sort described in Chapter V the problem of meeting the "accrued liabilities" is forced sharply to the front at the outset, since the purchase of one $10 (or other small) annuity each year for those workers already approaching the retirement age will not provide a substantial income at retirement. For

example, a worker already fifty-seven who would retire at, say, age sixty-five, would have only eight annuity policies. If these were for $10 each the total benefit would be only $80 per year.

It is a merit, rather than a defect, of the annuity system that provision for the "accrued liability" is thus brought into the foreground, since, as already made clear, failure adequately to meet this problem has been responsible for the shipwreck or reorganization of more than one pension plan.

There are various ways in which the "accrued liabilities" may be met under an annuity system. One very simple method—although possibly a needlessly expensive one—would be to purchase at once for such older workers one additional annuity for each year of "back" service (beyond the initial "trial-period") already rendered at the time the plan was put into operation. For instance, taking the illustrative case just cited above, if a worker fifty-seven years of age at the time the annuity system was adopted had entered the employ of the company at age twenty, he already would have completed thirty-seven years of service. If the "trial-period" under the plan was five years, he would have had thirty-two years of "back" service. If the company should purchase one annuity for each of these thirty-two years of "back" service and continue to purchase

one annuity each year until he reached age sixty-five, he would have on retirement not eight, but forty, annuity policies. If each of these assured him an income of $10 for the rest of his life, he would have an annual income of $400. The cost of such policies to cover "back" service would, of course, be governed by the age of the worker at the time they were purchased, and the total first cost would be very much greater than if they had been purchased year by year beginning at age twenty-five.

Computations made by one establishment indicated that the cost of meeting the "accrued liabilities" in this way would be approximately ten times the cost the first year of buying one annuity for every worker on the payroll with over five years of service. Or, to use hypothetical figures, if the cost of purchasing one $10 annuity for every worker on the payroll with over five years of service were $50,000, then the cost of meeting the "back" annuities in this case would have been approximately $500,000. These ratios cannot be regarded as generally applicable, since the distribution by ages, the proportion of men and women on the force, and the rates of labor turnover, will very greatly affect the result. The illustration may, however, afford some idea of the

relative cost of meeting the "accrued liability" in this way.

The "accrued liability" under an annuity system probably could be met at somewhat less expense in the case of workers approaching the retirement age by deferring the purchase of additional annuities for back service until their retirement actually took place. While the immediate cost of annuities so deferred would be somewhat greater at the higher age then attained, the real cost, for reasons already explained, would be about the same. If, in the meantime, any of these workers were to die—and, in the case of a large establishment, a number certainly would—leaving no dependents, the company could thus save the cost of such annuities for back service, at least in many cases. (If such workers left dependents, it is true that the company might feel disposed to do something for these.) Again, some of these older workers might voluntarily quit the company's service, and the management might justly take the ground that it was under no real obligation to make the plan retroactive in such cases, at least as a universal practice.

In these and in other ways it is possible that the cost of meeting the "accrued liabilities" could be reduced from the amount required to purchase

annuities representing every year of back service (beyond the stipulated "trial service period") immediately upon the adoption of the annuity plan.

It might be argued that if such postponement of the purchase of annuities was wise in the case of present workers of advanced years, then the purchase of annuities should in all cases be deferred until retirement. This suggestion is entirely in conflict with the fundamental concept of the annuity system. A particular feature of the annuity system is its immediate appeal to the worker and its definite assurance that each year of faithful service will be rewarded at the time by an additional annuity policy. In this respect the annuity system, as already shown, is greatly superior to the ordinary pension system, where the worker has merely the promise, and at times a very uncertain promise, of a retirement benefit until he actually enters on the pension roll. It is largely because of this assurance that the annuity system may be expected to reduce labor turnover.

Even the immediate purchase of annuities to represent back service in every case, however, apparently would be no more expensive than the provision for "accrued liabilities" under a pension plan. Indeed, in view of the fact that many workers at the time an annuity system is estab-

lished would have only a few years of "back" service to their credit, there is very strong ground for the opinion that the cost of meeting the "accrued liabilities" in this way would be substantially less than the cost of meeting them under a formal pension system. In comparing the costs under the two systems, however, it should be kept in mind that they do not aim to produce identical results. The cumulative annuity system is essentially a "reward-of-service" system, and the total annuity at retirement is dependent on the number of annuity policies accumulated, rather than on the amount needed to support the worker in old age. It may be noted, moreover, that the "trial service" period contemplated in the case of a cumulative annuity system would affect such a comparison of costs.

One practical consideration under such an annuity system is that workers joining the force at, say, age forty-five, and retiring at, say, age sixty-five, would not secure a large total income on the basis of a $10 annuity for each year of service in excess of five. Any tendency to depart from the plan and purchase more annuities for such workers will, of course, increase the cost. Yet there doubtless will be cases where the employer will feel disposed to do this.

If such an annuity system were in general use

in industry, this difficulty would largely be obviated, since workers coming on the force at, say, age forty-five, presumably would already have earned several annuity policies by prior service elsewhere, so that the last employer need consider only the number of years of service actually rendered him.[1] In the case of chronic "floaters" the aggregate number of annuities earned might be negligible. The responsibility for this, however, could not fairly be placed on the employer.

A very great advantage in providing for the "accrued liabilities" under the annuity system is that the cost can be definitely figured at the time. If the company is able to meet this cost at once, or to meet it during a brief period of, say, five or ten years, the plan has a very great attractiveness, as against leaving these "accrued liabilities" to interfere with the normal operation of the plan.

From the standpoint of the "accrued liabilities," therefore, as in numerous other respects, the annuity system appears to have a decided advantage over the ordinary pension system.

[1] In the case of workers of advanced ages it might be practicable to shorten the "trial period."

CHAPTER IX

BENEFITS TO BE INCLUDED IN A PENSION OR ANNUITY SYSTEM

ONCE an industrial employer has decided to introduce a pension or annuity system, his first problem is to determine what benefits shall be provided.

It should be emphasized that a pension in a strict sense is a retirement benefit, to be paid to workers no longer able to perform their tasks, or who have rendered a given measure of service. Death benefits, and even disability benefits where the disability occurs prior to superannuation, are insurance features quite distinct from a pension proper. A withdrawal equity is in the nature of a surrender value in an insurance policy. All these collateral features necessarily increase the cost of a retirement system. This, of course, does not necessarily condemn them, but their character should be understood.

The following statement by a prominent British actuary may be cited in this connection:

"Returns of contributions in the event of death are simply insurances, and must be paid for like any other insurance. The more the system of making returns of contributions is extended, the more does the character of the institution depart from that of a pension fund, and approach that of a savings bank." [1]

While, however, the technical significance of the term pension is thus restricted, it may safely be asserted that an employer who inaugurates a pension system will be disappointed if it does not include some benefits in addition to pensions proper. At least the following should be provided either in the retirement plan or in some collateral plan like group insurance.

1. A retirement benefit in the form of a pension or an annuity commencing at superannuation and payable in monthly or reasonably frequent installments.
2. A total disability benefit commencing whenever the disability occurs, except as provided for under workmen's compensation.
3. A death benefit, the value possibly increasing with years of service rendered.
4. A withdrawal equity in case of separation, the value also increasing with years of service.[2]

[1] James J. M'Lauchlan. "The Fundamental Principles of Pension Funds": Transactions of the Faculty of Actuaries, Vol. IV, No. 41, p. 224.

[2] In the case of a cumulative annuity system, such a withdrawal equity, on a deferred basis, is inherent in the plan.

While many other features can be added, such a schedule of benefits fairly meets the requirements of a retirement plan. Moreover, there is much to be said in favor of limiting benefits to such a schedule.

The Retirement Benefit

The inclusion of a retirement benefit calls for no discussion. This is, of course, the primary consideration. The desirability of making this payable in monthly or other frequent installments, however, may be emphasized. Under some plans a worker, on retirement, is permitted to take the accumulated value of the benefit in a lump sum. While in a few cases this may be advantageous to the recipient, as a general rule it is almost certain to prove unwise. Workers who thus take a lump sum payment will be inclined to risk it in investments at an age when they neither are fitted nor can afford to take such chances. Moreover, they become the marked victims of unscrupulous promoters with doubtful schemes to offer or doubtful securities to sell. Indeed, if one purpose of an employer in establishing a pension system is to assure workers of a means of support in old age, it seems imperative that the payments be made in regular installments and not on a lump-sum basis.

It seems exceedingly desirable, moreover, in the case of workers who die shortly after going on the pension roll, that such a retirement benefit be paid to their estates until the accrued value of the equity has been exhausted. Under some plans, only one monthly payment is made to the estates of such annuitants. While such a practice can be defended, it is in the nature of a tontine arrangement. It is true that a guarantee of some stipulated number of payments to the estate of a pensioner who thus dies before his equity is exhausted will add materially to the cost of a plan. Nevertheless, such a guarantee seems desirable. Otherwise, a worker who has depended on his pension to support his wife or other members of his family in old age may leave them completely unprovided for in the event of his death. Where a plan is on a contributory basis, it is only reasonable that the equity built up by the worker's contribution shall thus be paid out to his estate in the event of his death. Indeed, as already made clear, under a contributory system, the employees will almost certainly demand that the accrued value of their equity be thus returned. As repeatedly pointed out in this report, the argument holds with equal force under a noncontributory system to the extent that the deferred-pay theory has been applicable.

The Total Disability Benefit

The inclusion in the retirement system of a total disability benefit is easily justified. The moment a worker is totally incapacitated he is financially helpless, and provision against this contingency as part of a retirement scheme is entirely logical. Moreover, the increase in cost ordinarily is relatively small. To the extent that such permanent incapacitation is already provided for through Workmen's Compensation Acts, duplication of benefits through a retirement plan may, of course, be avoided.

While, however, a total disability benefit is a desirable feature of any retirement scheme, in the case of a system of paid-up annuities like that discussed in Chapter V there are strong arguments in favor of providing this benefit through a separate policy rather than in the annuity policy itself. Otherwise (since the annuity policies would be retained by the worker in case he left the service) an employer might be insuring workers against future disabilities which had no relation to their service for him.

The Death Benefit

Opinions differ as to whether a retirement plan should provide a death benefit, but the weight

of argument is strongly in favor of its inclusion, either directly in the plan, or by some collateral plan of insurance. It seems reasonably clear that a worker with a family of young children will be far more disturbed over the possibility of their being left helpless when he is, perhaps, their sole support, than over his own dependency late in life when, perhaps, the same children will be able to assist him. In any event, it seems apparent that a worker should reasonably expect a death benefit equal at least to that which he could secure as a withdrawal benefit by a voluntary separation from the service. Indeed, a death benefit should be much greater than his withdrawal equity, where death occurs before the worker has reached an advanced age; otherwise it may be too small to be of real value. In any case, however, such a death benefit will make only temporary, or partial, provision for dependents, but, again, the rest of the burden may fairly be placed upon society.

In general, it seems advisable to cover the death hazard by a separate arrangement as, for instance, group insurance. This is especially true in the case of a system of paid-up annuities, for the same reasons as just noted in the discussion of a disability benefit. Since under an annuity

system the benefits would go to the worker even though he became separated from the service, the inclusion of these benefits in the policy might mean that an employer would be expending funds to cover hazards incurred by the worker later, in the service of another establishment. It is not reasonable to expect an employer to do this. Under an annuity system the retirement benefit, however, runs *pro rata* with the service rendered for the given establishment.

While much might be said in favor of a uniform death benefit for all workers, on the whole it seems reasonable that this benefit should increase moderately in proportion to the years of service rendered up to some given limit.[1]

The exclusion of a death benefit from a pension plan can be defended, but the arguments in favor of its inclusion appear to be convincing.

One writer has described the objections to state

[1] The scale of death benefits provided by the pension plan of one large industrial company is as follows, with a minimum of $500 and a maximum of $2,000.

For 1 year's service,	3 months' full pay.
For 2 years' service,	5 months' full pay.
For 3 years' service,	7 months' full pay.
For 4 years' service,	9 months' full pay.
For 5 years' service and over,	12 months' full pay.

Some such schedule of death benefits is not uncommon in pension plans. Often, however, the death hazard is covered by group insurance.

In many plans no death benefit is provided.

pension systems without a death benefit, in a picturesque manner, as follows:

"It is obvious that the State gambles with its employee for his wage. I will give you a portion of your wage as you earn it; the remainder we will toss for when I am finished with you. You yourself are the coin, with life on one side and death on the other. Live you win; die you lose. It is merely a case of robbing Peter to pay Paul, but Peter suffers none the less. What happens is somewhat as follows: Peter dies before he is pensionable. The total deductions made by the Government for the marketable value of his labors on account of the pension thereupon become lost to his dependents who, by reason of the early loss of Peter's wage-earning capacity, need it more than if he had lived—and go instead to make up Paul's pension when he retires, whose dependents, by réason of Paul's two hands being still available, need it perhaps less than do the defrauded relicts of Peter." [1]

The Withdrawal Equity

The arguments in favor of a withdrawal equity have already been discussed in connection with the question of deferred pay. Under a contributory plan, common justice requires the provision for a withdrawal benefit representing at least the

[1] Michael Peters. "The Mischief of Pensions." *The Gentleman's Magazine*, London, August, 1907, pp. 113–114.
See also Meriam. "Principles Governing the Retirement of Public Employees," p. 234.

net[1] contribution of the worker to the scheme, plus interest.

As already pointed out, to the extent that the deferred-pay theory holds, it is difficult to escape the conclusion that the worker is entitled to withdraw the employer's contribution as well as his own, subject to the limitations noted below.

Moreover, to the extent that the deferred-pay principle is operative, a withdrawal equity should similarly be recognized under a non-contributory system. Such return of employer's contribution is, however, extremely rare, even under a contributory system. Nevertheless, the argument in favor of it is very strong. It may be noted that the system of paid-up annuities clearly accepts this principle, since each annuity, when purchased, at once becomes the absolute property of the worker, regardless of whatever proportion of the cost may have been borne directly by the employer.

[1] A withdrawal benefit, it should be noted, may not necessarily equal the total contribution of the worker, plus interest, since, where death and disability benefits are provided, a proper proportion of the worker's contribution may be regarded as a charge for protection against these hazards. Thus, one writer says:

"The amount returned in event of resignation or dismissal in a wholly contributory system may with full and complete justice to the employee be less than the total amount of contributions with interest, if any of the benefits are in the nature of insurance against risks such as death or disability, against which the employee has been protected during his period of service and for which protection already received he should pay."—Lewis Meriam. "Principles Governing the Retirement of Public Employees," p. 231.

Sickness Benefit Inadvisable

Some pension systems also provide sickness benefits and benefits to widows or dependent children. The weight of argument is, however, against this. It is true that sickness is one of the major hazards before the industrial worker and, moreover, one of the principal causes of dependency. It is also true that the possibility of loss of wages as a result of sickness or unemployment is regarded by the average worker with far more concern than the possibility of dependency in old age, or the possibility of premature death. Even if it be conceded, however, that some coöperative scheme for meeting the sickness hazard is desirable, it will ordinarily be found inadvisable to include such a provision within a pension plan. Where a pension plan is financed wholly or chiefly by the employer there is grave danger that the inclusion of a sickness benefit will lead to malingering, while the possibility of violent increases in expenditures because of epidemics or for other reason tends to jeopardize the security of the pension itself, the protection of which is of prime importance.

Much may be said in favor of sickness benefit schemes financed by mutual associations of employees themselves, either with or without any

direct assistance from the employer. This matter need not be discussed here, further than to say that it should be treated as a problem separate from the problem of pensions.

Provision for Widows and Children Impracticable

Specific provision for widows and dependent children cannot reasonably be expected of an ordinary pension plan. Industry cannot provide against all the hazards of life. Moreover, the private employer may with justice take the ground that his criterion should be the service rendered and not the number of an employee's dependents. To the extent that a return of contributions in the event of death is provided, some provision, though small, is in fact made for dependents. It is, as already stated, reasonable to provide that a retirement benefit shall continue to go to the estate of a pensioner who dies shortly after going on the pension roll, until the net value of the pension earned or accumulated up to the time of his retirement had been paid out. Some such provision seems only just; otherwise the plan assumes a tontine character. While such a provision may result in a substantial benefit to dependents, it would not be contingent upon the length of their lives or upon the length of time during which they might need assistance but, instead, would be

measured by the value of the equity which the worker had built up by his service. Beyond this, provision for dependents may properly be regarded as the concern of society as a whole, rather than that of a private retirement scheme.

In this connection it may be noted that where a plan includes provision for the dependents of a worker it usually happens that in time these will constitute a larger proportion of the total number of pensioners than will the workers themselves. This experience has been common in the case of public service pensions of long standing.

Amount of Benefit

Having decided upon the character of the benefits to be included, the next step is to determine upon their amount and the method of arranging them.

With respect to the retirement allowance proper, the best opinion is in favor of moderate benefits. One strong argument in favor of this is the practical consideration of cost. A further point is that the benefit should not be so large as to induce men amply able to work to cease productive activity. As pointed out on page 27 a pension should not be regarded as a means of affording men approaching old age an opportunity for extended idleness.

A common practice is to provide pensions of anywhere from $18 to $30 a month for workers who ordinarily will not go on the pension roll until, say, sixty-five years of age. Some years ago pensions of $12 a month were not uncommon, but there has been a tendency to increase the minimum, which ordinarily, where one is named, is not less than $20 a month.

The minimum pension stipulated in several plans which contain such a provision is as follows:

American Smelting & Refining Co.	$20	per	month
American Sugar Refining Co.....	20	"	"
Case (J. I.) Threshing Machine Co.	18	"	"
Cleveland Cliffs Iron Co.........	18	"	"
Colorado Fuel & Iron Co........	20	"	"
Crane Co.	30	"	"
Crompton & Knowles Loom Works	15	"	"
Deere & Co.....................	18	"	"
Diamond Match Co.	25	"	"
International Harvester Co.......	30	"	"
Pittsburgh Coal Co..............	20	"	"
Standard Sanitary Mfg. Co.......	20	"	"
U. S. Steel & Carnegie Pension Fund	12	"	"

The pension plans of the above companies are of the non-contributory type. The minimum allowances—and maximum figures—for several other companies and for some other types of plan will be found in the Appendix.

In a large number of cases the pension is dependent upon the final wage, or on the average wages for the last five or ten years of service. A common practice is to allow one per cent or more of such final wage for every year of service. This method, it will be seen, tends to make allowances for different lengths of service and also for differences in the wage status of the recipients. While both these features may be highly desirable, this method of calculation is a very dangerous one, and objectionable. The danger is well illustrated by the great increase in wages which has taken place in recent years as a result of the disturbances caused by the World War. The use of the final wage or average wage for, say, five or ten years injects a very serious element of instability into the pension plan. It also obviously tends to produce inequality as between different pensioners. For instance, under such an arrangement pensioners who have gone on the rolls since the war period will draw much heavier benefits than was originally contemplated. It is entirely safe to predict that this will force a radical reorganization of more than one pension plan now in operation.

Instead of basing the *pension* on the final wage, or an average of wages, a much safer method is to base the *contribution* on the wages received dur-

ing the accumulation period, and let the amount of such contributions as accumulated under the compound interest principle determine the benefit when the pensioner actually enters upon the pension roll. An objection to this method is that the worker cannot know in advance just what his pension will be. But at least he can estimate the amount with some degree of accuracy. In any event the worker is better off with the certainty of a substantial payment than with a prospect that the plan may be so radically reorganized as to practically shut him out of any benefit whatever, as has sometimes happened. It may be noted that such a scheme of basing contributions on the wages received while the fund is being built up takes account both of differences in wage status and in length of service.

A system of paid-up annuities such as that outlined in Chapter V has a distinct advantage in this respect, since the amount of the annuity secured by each year of service is definitely guaranteed by the insurance company underwriting the plan. The aggregate amount is, moreover, directly proportional to the length of service rendered.

Such an annuity system can be made to take account of differences in wages by providing, instead of a uniform yearly annuity for all workers,

that the amount shall be whatever a given percentage of the current year's wage will buy. This involves a considerable administrative burden, however, and insurance companies prefer to write their annuities in round amounts. A simple method of making an approximate recognition of differences in wages would be to classify workers into wage groups, with a uniform annuity for workers coming within a given group but varying as between different groups.

As a matter of fact, there is considerable to be said in favor of disregarding the amount of wages earned in fixing annuities and letting these vary only with the length of service rendered.

Arbitrary Retirement Age Objectionable

Another common, but objectionable, practice in many pension plans is to fix an arbitrary age of retirement, either at the option of the worker or at the option of the company. A more desirable arrangement is to make the retirement age subject to the discretion of a pension committee, provided there is adequate guarantee that the worker's rights will be protected. If a worker is fully able to perform his task there is no real reason for retiring him simply because he has reached, say, age sixty or sixty-five. Ordinarily his wages, even at that age, will be considerably

larger than his pension, while, moreover, it is desirable, both from his standpoint and from the standpoint of society, that he should continue to be a producer as long as he is able to do so. In this connection it may be noted that most workers of from sixty to sixty-five years of age prefer to continue on the payroll rather than to go on the pension roll. Instances are very numerous where workers have protested against being placed on the pension roll at a stipulated age or where, having been placed on the pension roll, they have asked for reinstatement on the payroll.

Where a retirement age is stipulated there is much to be said in favor of making it fairly high, say, sixty-five years in the case of males, with provision for earlier retirement if the worker becomes incapacitated. Aside from the desirability of allowing the worker to continue on the payroll as long as he is able to perform his work efficiently, is the important question of cost.

A good illustration of the increased cost of a pension system as a result of lowering the age of retirement is afforded by the following table submitted to the Executive Committee of the United States Civil Service Retirement Association by actuaries of the New York Life Insurance Company in 1902, the rates being applicable to a given pension for the salary group under consideration.

AVERAGE PERCENTAGE OF SALARY CONTRIBUTION

Present age	Pension age, 70 *Per cent*	Pension age, 60 *Per cent*	Pension age, 55 *Per cent*
15	0.8	1.6	2.6
25	1.5	2.8	4.8
35	2.9	5.5	9.8
45	5.2	10.8	21.1

In the case of a system of paid-up annuities it is necessary to have a stated retirement age in order to enable the insurance company to make its calculations. However, it may easily be provided that the worker who reaches the retirement age and who is still able to perform his task may defer the commencement of the annuity payments until he is incapacitated, in which case the yearly installments will rise rapidly.[1] On the

[1] Thus the annual payments under one type of annuity policy yielding $10 at age 65 increase as follows if not drawn upon until a later year:

Age	*Males*	*Females*
65	$10.00	$10.00
66	11.07	10.95
67	12.30	12.03
68	13.72	13.24
69	15.36	14.63
70	17.26	16.22

On the other hand, such an annuity policy yielding $10 per year at age 65, would yield only the following amounts if payments were commenced at age 60, 61, 62, 63, or 64, respectively:

Age	*Males*	*Females*
60	$4.48	$4.48
61	5.24	5.24
62	6.17	6.17
63	7.25	7.25
64	8.49	8.49

other hand, it can be provided that, if necessary, the annuity may be payable before the stated age. In this case, as already made clear, the installments of the annuity will be very sharply reduced, since the insurance company not only loses the interest accumulation, but at the same time must figure on a greater expectancy of life.

CHAPTER X

SUMMARY AND CONCLUSIONS

FROM the preceding discussion it is apparent that the pension problem, even in its narrower or immediate aspects, is an exceedingly complicated one. Whatever system the employer may select, he is confronted with perplexing questions which cannot safely be disregarded.

For convenience, some of the major points developed in the previous chapters are brought together in the summary analysis on pages 220 to 223.

Discussions of the pension problem often have hinged largely upon the question whether the proposed system was of the contributory or non-contributory type. While it seems exceedingly desirable that the employee shall contribute directly to the cost of a pension system, it should be repeated that this matter is less vital than the question whether the system recognizes definite rights on the part of the worker. Where a system is operated on a contributory basis, the employer practically is compelled to recognize certain rights. Otherwise, the worker presumably would

be unwilling to contribute. However, if the principle of deferred pay is accepted—and it is difficult to see where, within the limits stated in Chapter II, that principle can be denied—the worker in reality is contributing to the cost under a non-contributory system. The essential question, therefore, is not whether the worker contributes directly but, rather, whether the pension system definitely and adequately safeguards his rights under the plan.

It has been shown that the "discretionary" type of pension system has been generally condemned by disinterested critics, not merely because of its inadequacy and its liability to abuse, but on the more fundamental ground that it does not place the worker's status on a definite contractual basis. It is axiomatic that a pension system should carry all reasonable assurance that the pensions will be paid. To quote again from the Report of the Special Committee of the Merchants' Association of New York, "A pension promise that is not certain involves an uncertain morality."

The issue of deferred pay is vital. To the extent that that principle is actually operative, it seems clear that a pension system should definitely recognize the right of the worker to a return of the pay so deferred. In this respect the "dis-

Summary Analysis of Various Types of Retirement Systems

Non-Contributory Pension System "Discretionary" Type	*Non-Contributory Pension System Limited-Contractual Type*	*Contributory Pension System*	*Cumulative Paid-up Annuity System*	*Informal Pension Policy*
(No contractual right to the pension recognized. No provision for "refunds" of accrued credits in case of separation from service.)[1]	(Recognizes contractual right to continuance of a pension, once commenced; otherwise same as discretionary type.)	(Half, or some other portion, of cost contributed directly by employee. Provision for return of employee's contribution, with or without interest in event of separation from service, but not for return of employer's contribution.)	(Provides for a small paid-up annuity, say, $10 a year, beginning at age sixty-five for each worker who has been with the company five years or more. Policy written by some strong insurance company.)	(No formal announcement of the plan to workers. No recognition of a contractual right. Pensions varied according to individual circumstances of the worker.)
Advantages	*Advantages*	*Advantages*	*Advantages*	*Advantages*
Company has complete control. Some financial hold on workers past middle age. Disciplinary features. Comparatively low cost. (Increases as benefits are extended.)	More equitable than the "discretionary" type. Possibility of loss of pension if *once granted* eliminated. Financial appeal to *older* workers strong. "Deferred pay" issue met for those workers who reach retirement age. Employer has practically complete control.	Places part of responsibility of providing for old age on employee directly, thus reducing element of gratuity. Recognizes in part contractual rights and also, in part, meets the issue of deferred pay. Return of contributions in a measure acts as a death benefit in the case of those who	Largely eliminates element of charity; is a payment for a special quality of service — continuity — which has a real value. Is a business proposition; employer pays for what he gets; worker rewarded for service actually rendered. Squarely meets "deferred pay" issue.	Complete freedom from contractual obligation. Avoidance of deferred pay issue. Better control of cost. Greater latitude in hiring workers of advanced years. Opportunity to modify benefits.

[1] Some plans of this type provide a death benefit.

Company can modify plan at its option. Special individual cases easily arranged for. No financial obligation of a contractual character. *Disadvantages* Highly paternalistic; ostensibly a gratuity; actually may be a charge on the worker. If a charity, highly inefficient and possibly irritating. Practically no hold on younger employees whom it is especially desirable to retain. Disciplinary features of doubtful value and sharply condemned by disinterested students. Promise easily transformed into a threat, tending to destroy good will.	Disciplinary features retained. *Disadvantages* Subject to all of the uncertainties of the "discretionary" type until employees actually enter upon their pensions, viz.: Paternalistic; A tontine system; Disciplinary features easily abused; Worker's prospect of a pension involved in great uncertainty until he goes on pension roll; Does not meet issue of "deferred pay" for workers separated from service before retirement; Provides for only a small proportion of force; Small appeal to workers under middle age;	die before attaining pensionable age.[1] Is a form of "assisted savings" and, as such, may promote, rather than discourage, thrift. By requiring participation of employees in administration, may promote better understanding between management and workers. Has worked well in some cases; apparently best adapted to establishments where there are close relations with workers. Especially suited to government service. *Disadvantages* Must be compulsory to be effective; may thus encounter opposition. [1] Most plans of this type provide a death benefit.	Makes as effective provision as does a pension system for workers who remain until superannuation. Also makes *pro rata* provision for those who remain a shorter period; is thus equitable as between individual workers. More effective than a pension in eliminating superannuated workers. An offer "without strings." An appeal which cannot be distorted into a threat. May have greater effect in promoting good will. Worker has tangible evidence of benefit brought annually to his attention. Worker has complete assurance of eventual payment, irrespective of future condition of company.	*Disadvantages* Difficulty in large establishments of securing accurate information as to status of the worker. Danger of favoritism and of lack of uniformity in pension practice; benefits may be inadequate. Payments may be regarded as mere charity and thus tend to humiliate recipient. Danger that ultimate increase in cost will not be foreseen.

Summary Analysis of Various Types of Retirement Systems (Continued)

Non-Contributory Pension System "Discretionary" Type	*Non-Contributory Pension System Limited-Contractual Type*	*Contributory Pension System*	*Cumulative Paid-up Annuity System*	
Disadvantages—Cont. Benefits small in proportion as cost is low. Complete discretion of company makes plan extremely uncertain for the worker, who cannot be sure of a pension until it is commenced, and even then may forfeit it. To extent that "deferred pay" theory is actually operative, such a system constitutes an unjust withholding of wages except for the few who actually secure pensions. Is thus essentially a tontine scheme and, as such, objectionable. Meets problem of old age dependency to only a very limited extent.	*Disadvantages—Cont.* Inequitable as between different individuals; May discourage thrift. Company committed to future liabilities which cannot be accurately estimated. *Note* Non-contributory contractual system could be set up which would return the accumulated credits to workers leaving before the retirement age. The cost and administrative burdens of such a scheme, however, seem to make it far less attractive than an annuity system.	*Disadvantages—Cont.* Legal provisions in some states may prevent compulsory contributions. Practically requires participation of workers in administration of the fund. Involves heavy and continuing actuarial expense with frequent revaluation of the plan, and possibly amendment, either through increase of contribution or reduction of benefits. Greatly increases administrative burdens and administrative costs. Cannot be amended or discontinued as easily as a non-contributory plan.	*Advantages—Cont.* Fewer financial uncertainties than in any pension scheme. Maximum cost can be known each year in advance. Each year's arrangement a closed and completed transaction. Can be discontinued with much less difficulty than a pension system. Can be temporarily modified without wrecking scheme. Practically no actuarial expense required. Company largely relieved of administrative burdens.	

May discourage thrift. Inequitable as between individuals. A worker resigning or dismissed after, say, nineteen years would get nothing, where one remaining twenty years might secure a large benefit. Actual results of doubtful value. Some appreciation reported, but no definite effect on labor turn-over or efficiency. Appeal chiefly to older workers, who are likely to stay anyway. Condemned by many disinterested students of pension problems.		If theory of deferred pay be fully accepted, the employer's contribution, as well as the employee's contribution, should be returned in the event of separation from the service. This would greatly increase cost. Regarded as impracticable in private industry by some disinterested students of pension problems who, on *a priori* grounds, are in favor of it. Has been rejected by some industrial employers who have carefully considered it.	Contributory feature can be added on a *voluntary* basis, if desired. *Disadvantages* Involves considerable payments to workers who will leave before superannuation (but will be paid only to those remaining at least several years). Cost per individual worker steadily increases (but not necessarily for group). Probably somewhat more costly than an ordinary non-contributory pension plan. Benefits in many cases may be small. Unless on a contributory basis may tend to discourage thrift by workers. No actual experience by which to judge results.	

cretionary" type of pension is seriously inadequate and, indeed, may be grossly inequitable. The contributory type of pension system usually meets this issue in part. A system of paid-up annuities on the lines described in Chapter V should meet it squarely, regardless of whether or not the worker directly contributes to the cost of the plan.

While, however, the question of direct contributions is of less importance than the question of contractual right, the contributory system is to be recommended wherever it is practicable. Not only will workers ordinarily take a keener interest in the plan, but they can feel that they are largely providing for their superannuation through their own effort.

It has been shown that the employer cannot reasonably expect a pension system to bring tangible results in the way of reduced labor turnover, or greater contentment, sufficient to justify its administrative burden and cost. An annuity system, however, because of its greater certainty and more direct appeal, may have an important influence on labor turnover.

It has also been shown that the use of pension systems for purposes of disciplinary control is likely to prove disappointing while, moreover,

such use of a pension system is inherently objectionable.

The one controlling incentive to adopt a retirement system from the employer's standpoint is that it may enable him more readily to dismiss workers who, because of superannuation or other disability, are no longer able to perform their tasks and who reduce the efficiency of the force as a whole. While other results of a pension system may be important, they ordinarily will be incidental to, or at least collateral to, this main object.

The inevitable tendency of expenditures to increase over a long period of time under a formal pension system should be clearly appreciated. An employer who decides to inaugurate a pension or annuity system should have the cost most carefully estimated by competent experts, making certain that all due attention is given to the problem of "accrued liabilities." Practically the only safe method of financing a formal pension system is on the reserve basis, after detailed actuarial calculations. Even then, frequent revaluations of the plan will be necessary to safeguard its solvency. In general, the only safe policy is to determine the benefits on an actuarial basis, by the amount which the contributions will jus-

tify, and not to make them directly contingent upon the salary or wages of the employee.

The too common practice of following the provisions of some plan that seems attractive is an exceedingly dangerous one. While the type of plan should be determined on broad grounds of equity and economic soundness, the details should be worked out with special reference to the needs of, and the conditions prevailing in, the individual establishment, particularly in respect to age and sex distribution and labor turnover. Any attempt to apply a general formula is practically certain to lead to disaster in a large majority of cases. Unless an employer is ready to assume the burden and expense of thus preparing a system adapted to his individual needs, he should avoid committing himself to the adoption of any formal system.

Broader Aspects of the Pension Problem

From the standpoint of the individual employer the pension problem may seem to be chiefly one of costs and tangible results. In reality, these considerations are far less important than the fundamental issues of social and economic policy involved. The pension issue is, indeed, one of the broadest and most far-reaching

of the many perplexing problems arising out of the industrial relationship.

Final judgment on the broad question as to whether *any* system of pensions is desirable in private industry will depend very largely upon the attitude of the critic towards the labor relationship from a social standpoint. Those who feel that it is desirable that wage earners shall be responsible for their own destinies, and who wish to reduce the element of paternalism on the part of the employer to a minimum, will, in general, be opposed to private industrial pension systems, at least unless these are of a contractual character. They will be receptive to the argument that most pension systems keep down immediate or money wages and tend at the same time to accentuate class distinctions between employers and employees. Such critics, if consistent, will take the position that even though the task of raising the real wage status of workers as a whole may be slow, in the long run Labor will be benefited by meeting the situation squarely rather than by accepting such temporary relief as may be afforded through pension systems, at least where these take the form of a gratuity. Others, who have no prejudice against pension systems *per se*, often may be inclined to oppose the ex-

tension of such systems in private industry until the various complexities of the problem have been more carefully analyzed. Experience thus far has been too brief and too limited to warrant final conclusions on many points. As the Appendix accompanying this volume shows, most private industrial pension systems are of comparatively recent origin. Thus, of ninety-three pension plans there listed, only ten were inaugurated prior to 1910. This limited experience would, in any event, necessitate conservatism in passing judgment. The ultimate results of such systems can be determined only after very extended operation. A further consideration in this connection is that many students of the pension problem feel that it is not one to be undertaken by employers alone, but jointly by employers, employees, and the general public. It will be remembered that several of the authorities cited in Chapter I took such a position.

The individual employer, faced with the necessity of retiring aged or disabled workers who are reducing the efficiency of his force, can hardly be blamed for not waiting until the problem is worked out on these broad lines, or for adopting any system which seems to promise an improvement over a continuation of existing conditions in his establishment. But it should be recognized

that such efforts, however well meant, may prove unsatisfactory.

It may fairly be said that most pension systems now in operation do not make a substantial approach toward solving the problem of old age dependency among industrial workers. From the evidence presented in preceding chapters, it is obvious that only a trifling proportion of wage-earners ever go on the pension roll. A much larger number, although spending the greater part of their lives in industry, become separated from the service without any retirement benefit. If Industry is to undertake to deal with the superannuation problem at all, it may fairly be required to devise some more equitable and more effective method than that reflected in existing private pension practice.

In this respect the annuity system, discussed in Chapter V, has a particular appeal, and especially if its introduction could be made general among industrial establishments. With such a system in practically universal operation, the great body of wage-earners would be making some provision for support in old age and (except for the "trial service" period) *pro rata* with every year of service rendered. Because of this fact the annuity system seems entitled to most serious consideration, not only by industrial executives, but by the

public at large. If, instead of pensioning off a mere handful of superannuated workers, a system can be devised by which the great majority of these workers will have acquired a substantial provision against old age by the time they become superannuated, then society as a whole, as well as these individuals, should reap a substantial benefit, while the burden would be distributed instead of falling on the last employer.

Under such a condition it should be possible to effect a material reduction in the cost of poor relief, which is a very important factor in the tax bill of every community. More important than this possible reduction in taxes, however, is the fact that the great body of wage-earners could feel that their income in old age had been fairly earned by their service during their productive years. The difference in the effect upon national character of having these workers thus virtually self-supporting in their old age, instead of objects of charity, or recipients of gratuities, can hardly be over-estimated.

APPENDIX I

ANALYSIS OF PENSION PLANS IN INDUSTRIAL ESTABLISHMENTS

Note

THE following tables give a brief analysis of important features of those pension plans of industrial establishments assembled in the course of this study.

Because of the numerous details in any given pension plan and the great variation in provisions as between different plans, it is impracticable to present all the facts in such a condensed comparative analysis. For example, the age and service requirements contained in the plan of one large company are as follows:

(*a*) "Any male employee when he shall have reached the age of seventy years, and any female employee when she shall have reached the age of sixty-five years, shall be required to retire, irrespective of length of service.

(*b*) "Any male employee when he shall have reached the age of sixty-five years, and any female employee when she shall have reached the age of sixty years, who in either case shall have been in the continuous service of the Company twenty years or more, may, at the request of the employee, subject to the approval of the Executive Committee, be retired from active service.

(*c*) "Any male employee when he shall have reached the age of sixty years, and any female employee when she shall have reached the age of fifty-five years, who in either case shall have been in the continuous service of the Company for twenty-five years or more, may, at the request of the employee, subject to the approval of the Executive Committee, be retired from active service.

(*d*) "Any male or female employee who shall have been thirty years or more in the continuous service of the Company, may, at the request of the employee, subject to the approval of the Executive Committee, be retired from active service.

(*e*) "Any employee who shall have been fifteen years or more in the service of the Company, and who shall have become permanently totally incapacitated through no fault of his or her own, as the result of sickness or injury (compensation for which has not otherwise been provided), may, at the request of the employee, subject to the approval of the Executive Committee, be retired from active service."

To give all the information with respect to age and service requirements for a large number of companies would have made the tabulation so unwieldy as to be almost unreadable. Instead, effort has been made to give the age and service requirements that would, as a matter of practical experience, be most generally applicable. Thus, in the case of the plan above quoted, the age and service requirements are given in the table as sixty-five and twenty, respectively, for males, and sixty and twenty, respectively, for females, as it seems reasonably certain that more workers would be retired under these provisions than under provision (*a*), which requires an age of seventy

for males and an age of sixty-five for females, or under provision (*c*), which reduces the age limit, but increases the required service period to twenty-five years.

It should be understood, therefore, that in most cases the plans contain other provisions than those listed in the table. Most plans, moreover, contain exceptions, or special provisions. In order to get complete information in any specific case it is necessary to refer to a copy of the plan itself.

It will be noted in the first column under the heading "Amount of Pension" there is given a percentage of the average salary for the final ten years which is to be multiplied by the number of years of service. Thus if the average annual wage for such a ten-year period were $1,000 and the pension one per cent of this for every year of service, the total pension in the case of a worker with, say, thirty years of service, would be $300, as follows:

Average wage for final ten years............	$1,000
One per cent of this......................	10
For thirty years of service the total pension would be	300

The use of the final wage for ten years of service is so common that this has been taken as a standard. In many cases, however, the average wage for the final five years, or the final three years, of service (or some other period) is used as a basis. Such cases have been indicated by inserting in parentheses the number of years actually taken as a basis.

With respect to maximum and minimum amounts of a pension, it should be noted that sometimes this

is a given percentage of such average wage for the final ten years (or other period), and that sometimes this is limited by a fixed maximum. Thus, in the case of the American Brass Company the maximum is sixty per cent of the average salary for the final three years of service, provided this amount does not exceed $5,000.

Where it was known that the company had a group insurance plan in force, this fact has been indicated under the column headed "Death Benefit Provision," but since the number of companies adopting such plans is constantly increasing, the information on this point may not be complete.

An examination of this appendix table shows that a service requirement of twenty years is very common, and that a shorter period is infrequent. Service requirements of twenty-five years are fairly frequent, and are found in connection with an age limit of sixty-five years, as well as of sixty years. In many cases, as already indicated, the same plan provides both for an age requirement of sixty-five years with twenty years of service, and for an age requirement of sixty years with twenty-five years of service, or some other arrangement.

The age requirement for women frequently is five or ten years less than that for men, or, in other words, frequently is fifty-five, or even fifty years.

A considerable number of plans provide for compulsory retirement; in a majority of such cases this is fixed at seventy years.

In many plans provision is made for retirement at the request of the employee when he has fulfilled

the terms of the plan. In such cases the pensionable age is either sixty years or sixty-five years. In general, the plan reserves the right to the employer to retire a worker at the discretion of the Pension Board or Committee; in some cases, however, it is provided that the worker shall not be arbitrarily retired against his own wishes.

In general, where a minimum allowance is stipulated, this is $18 or $20 per month; a minimum of $300 per year is provided in a number of cases. Maximum provisions vary widely. One plan, that of the Midvale Steel & Ordnance Company, provides for a flat pension of $30 per month in all cases.

I. NON-CONTRIBUTORY "DISCRETIONARY" SYSTEMS

Company	Date of Plan	Age and Service Requirements *		Amount of Pension			Death Benefit Provision
		Age	Serv-ice	% of av. salary for final 10 years to be multiplied by years of service[a]	Max.	Min.	
Am. Brass Co.	1913	65	25	2% (3 yrs.)	60% of av. salary (or $5,000)		In plan
Am. Brake Shoe & Foundry Co.	1911	60	20	1% [b]			Group Ins.
Am. Smelting & Refining Co.	1913	60 50 (F)	20 20	1%	$2,500 per yr.	$20 per mo.	Group Ins.
Am. Express Co.	1875	60	20	50% (flat)[c]	$500 per yr.		
Am. Sugar Refining Co.	1912	65 60 (F)	25	1%	$5,000 per yr.	$20 per mo.	Group Ins.
Arabol Mfg. Co.	1914	68	20	⅛ pay [c]	$8 per week	$5 per wk.	Life Ins.
Bancroft, Jos. & Sons Co.	1915	65 55 (F)	20 20	1% (5 yrs.)			
Beech Nut Packing Co.	1912	70	10	2% of day wage (for each year of service)			Life Ins.

Blount Plow Works.....	1913	60	20	1% (5 yrs.)	$1,000 per yr.		
Calumet & Hecla Mining Co.	1904	60	20	1% [d]			
Case (J. I.) Threshing Machine Co.	1915	65	20	1% (of highest year's salary during final 10 yrs.)	$50 per mo.	$18 per mo.	Emp. Asso.
Cheney Bros.	1910	65 55 (F)	25 20	10% of av. monthly pay for final 10 yrs. plus 1% for every yr. of service)			Emp. Asso.
Cleveland Cliffs Iron Co.	1909	60	25	1%	$1,200 per yr.	$18 per mo.	
Cleveland Metal Products Co.	1921	65 55 (F)	20 20	1% (5 yrs.) plus flat payment of $10	$250 per mo.	$30 per mo.	
Colorado Fuel & Iron Co.	1917	65 55 (F)	20 20	30% (flat) [c]		$20 per mo.	

* As stated in the general appendix note, many plans contain a variety of age and service requirements. Thus, many plans which provide for retirement at age 65 after 20 years of service, permit retirement at age 60 after 25 years of service.

[a] Where some other period of years is taken as a basis, this has been stated in parentheses.

[b] Pension Board may use ten consecutive years showing highest wages.

[c] i.e., not multiplied by years of service.

[d] Pensions run for 5 years.

I. NON-CONTRIBUTORY "DISCRETIONARY" SYSTEMS (*Continued*)

Company	Date of Plan	Age and Service Requirements *		Amount of Pension			Death Benefit Provision
		Age	Serv-ice	% of av. salary for final 10 years to be multiplied by years of service[a]	Max.	Min.	
Commonwealth Edison Co.	1912	60	15	1½% (for 5 yrs. of highest pay)[e]	$6,000	$300 [f]	Emp. Asso.
Consolidated Gas Co. of New York		50	25	2% (5 yrs.)	60% of such av. pay		
Consolidated G. L. & P. Co. of Baltimore.....	1911	65	15	1¼% (5 yrs.)		$20 per mo.	Col. Plan
Crane Co.	1916	60 50 (F)	20 20	2% (5 yrs.)	$125 per mo.	$30 per mo.	Group Ins.
Crompton & Knowles Loom Works	1916	65 55 (F)	25 25	1% (15 yrs.)		$15 per mo.	Emp. Asso.
Deere & Co.	1918	65	20	1½%		$18 per mo.	In plan.
Du Pont (E. I.) de Nemours Co.	1903	(g)	15	1½% (of highest (av. mo. pay in last 10 yrs.)			
Diamond Match Co.....		65 60 (F)	25 20	1%	$100 per mo.	$25 per mo.	

Edison Elec. Illum. Co..	1913	65 60 (F)	15 15	1%	$300 per yr.		In plan.
General Fire Ext. Co....	1914	65	25	1% (and upwards)[i]	$1,500	$420	
International Harvester Company	1908	65 50 (F)	20 20	1½% (of av. pay for 10 consecutive yrs. of highest pay)	½ of such av. pay (or $2,500)	$30 per mo.	Emp. Asso.
International Silver Company	1912	60 50 (F)	25 20	1% plus 10% of av. monthly pay for 3 yrs.	$100		
Kimberly-Clark Co......	1915	65 55 (F)	25	1%	$50 per mo.	$20 per mo. ($15 F.)	
Landers, Frary & Clark..	1916	65 55 (F)	25 25	1%	$1,000 per yr.	$250 per yr.	
Midvale Steel & Ordnance Co.	1919	65 55 (F)	25 25		$30 per mo. in all cases		
Miner-Hillard Milling Co.[k]		65	20	1% of av. annual pay[c]	$50 per mo.	$20 per mo.	

[c] i.e., not multiplied by years of service.
[e] Rate is 2% for certain groups of older employees.
[f] Where period of continuous service is 15 years or more.
[g] No age limit.
[i] Where service period exceeds 30 years, rate increases progressively for additional years.
[k] Pension plan practically inoperative.

I. NON-CONTRIBUTORY "DISCRETIONARY" SYSTEMS (*Continued*)

Company	Date of Plan	Age and Service Requirements*		Amount of Pension			Death Benefit Provision
		Age	Service	% of av. salary for final 10 years to be multiplied by years of service[a]	Max.	Min.	
Murphy Varnish Co.	1919	60	20	2%	$200 per mo.		Group Ins.
Nettleton (A. E.) & Co.	1914		20 (if disabled)	10% of av. wage for 10 yrs. plus 2% for each yr. above 20[c h]			
Newport News & Hampton Ry., Gas & Elec. Co.	1915	60	25	1%		$240 per yr.	Life Ins.
Newport News Shipbuilding & D. D. Co.	1915	65 55 (F)	25 20	1%			
Niagara Falls Power Company	1919	65		1½% of highest amount of pay in one yr. of final 10 yrs.			

Otis Elevator Co.	1913	60 55 (F)	20 20	1%	$125 per mo.	$25 per mo.	In plan.
Parke, Davis & Co.	1910	65 55 (F)	20 20	1%	$100 per mo.	$18 per mo.	
Peoples Gas Light & Coke Co.		60	15	2%			
Philadelphia Electric Co.	1911	65 60 (F)	15 15	2% of rate at end of highest 10 consecutive yrs.		$15 per mo.	Emp. Asso.
Pittsburgh Coal Co. (For salaried employees)	1919	65 55 (F)	25 25	1%	$100 per mo.	$20 per mo.	Emp. Asso.
Public Service Corp.	1911	65	25	1%		$240 per yr.	Life Ins.
Pullman Co.	1914	70 65 (F)	20 20	1%		$15 per mo.	
St. Joseph Lead Co.	1914	60	25	1%	$100 per mo.	$20 per mo.	Group Ins.
Simonds Mfg. Co.	1908	65	20	1½% (5 yrs.)			
Standard Sanitary Mfg. Co.	1913	60 50 (F)	25 25	1%	$30 per mo.	$20 per mo.	
Stanley Rule & Level Co.	1915	65 55 (F)	25 25	1%	$1,200 per yr.	$360 per yr.	Group Ins.
Steel Tube Co. of America		60	20	Half pay (based on final month of service)[c]			Group Ins.

[c] i.e., not multiplied by years of service.

I. NON-CONTRIBUTORY "DISCRETIONARY" SYSTEMS (*Continued*)

Company	Date of Plan [a]	Age and Service Requirements *		Amount of Pension			Death Benefit Provision
		Age	Serv-ice	% of av. salary for final 10 years to be multiplied by years of service[a]	Max.	Min.	
Swift & Co.	1916	60 50 (F)	25 25	Half pay (based on av. for final 5 yrs.)	$5,000 per yr.	$360 per yr.	
Talbot Mills	1903		15	1%[1]	$500		
Tenney, Chas. H. & Co. (Covering a group of gas and electric light companies under their management.)	1910	60	20	1%	$1,200	$200	
Tidewater Oil Co.	1914	60	20	2%		$40 per mo.	
U. S. Steel & Carnegie Pension Fund	1911	65 55 (F)	25 25	1%	$100 per mo.	$12 per mo.	
Vermont Marble Co.	1913	70	20	1%		$10 per mo.	
Victor Talking Machine Co.[m]	1913	65 55 (F)	20 20	$50 per month (flat)			

Virginia Bridge & Iron Co.	1914	60 50 (F)	20 20	2%	$100 per mo.	$12 per mo.	
Wallace (R.) & Sons Mfg. Co.	1912	65 55 (F)	20 20	1%	$100 per mo.	$15 per mo.	
Western Union Tel. Co..	1916	60 55 (F)	20 20	1%	$5,000 per yr.	$20 per mo.	In plan.
Williams (J. H.) & Co...	1914	65	25	1%	$100 per mo.	$15 per mo.	Life Ins.
Wurlitzer, Rudolph Co..	1910			2% of total pay received during employment [e]	$100 per mo.	-	Life Ins.

[e] i.e., not multiplied by years of service.
[1] Where service period exceeds 35 years, pension is 50% of average pay for final 10 years.
[m] No pensions paid to employees whose compensation exceeds $600 per month.

II. NON-CONTRIBUTORY "LIMITED—CONTRACTUAL" SYSTEMS

Company	Date of Plan	Age and Service Requirements		Amount of Pension			Death Benefit Provision
		Age	Serv-ice	% of av. salary for final 10 yrs. to be multiplied by yrs. of service [a]	Max.	Min.	
American Chain Co.	1919	65	20	1½%			In plan.
American Tel. & Tel. Co.[a]	1914	60	20	1%		$20 per mo.	In plan.
		55 (F)	20				
Boston Cons. Gas Co.		65	30	2%	$2,500 [o]	$360	
		60 (F)	30				
Butler Bros.	1907	60	20	1% (5 yrs.)	$1,000		
General Electric Co.	1912	70	20	1½%			
		60 (F)	20				
Gilbert & Barker Mfg. Co.	1918	65	20	2%	75% of such av. pay		In plan.
		55 (F)	20				
Goodrich (B. F.) Rubber Company	1915	65	20	1½%	$100 per mo.	$30 per mo.	Group Ins.
		60 (F)	20				
Goodyear Tire & Rubber Company			25	1½% of total pay for entire period of service [p]			Life Ins.

Gorham Mfg. Co.	1903	65 55 (F)	25 20	1% of final pay for every year of service [q]	$100 per mo.	$30 per mo.	
Holmes Elec. Protective Company	1915	60 55 (F)	20 20	1%		$20 per mo.	In plan.
Huyck (F. C.) & Sons	1911	70 60 (F)	20 20	25% of final wages plus 1% for each year of service beyond 20	50% of av. wages		Death benefit on contributory basis
Montgomery Ward & Co.		70	20	25% of final wages plus 1% for every year of service (in excess of 20)	50% of final wages or $1,500 per yr.		
Phoenix Horseshoe Co.	1917	60 50 (F)	20 20	1%	$100 per mo.	$18 per mo.	
Procter & Gamble Co.	1915	60 50 (F)		¾ of av. pay for final 2 yrs.[r]	$1,800		In plan.
Sprague, Warner & Co.	•1915	60	20	1/10 (5 yrs.) (flat)	$20 to $24 per wk.[s]		

[a] Where some other period of years is taken as a basis, this has been stated in parentheses.

[n] Pension plan of this company is one feature of an elaborate system including also sickness, disability and death benefits. The same plan is in general use among subsidiary and associated operating companies.

[o] No pension to exceed average pay for final 10 years.

[p] An elaborate sliding scale ranging from 1½% to 2½%, according to age and length of service.

[q] Company may use highest yearly rate of pay as basis.

[r] Where service period is 20 years or more; pro rata benefit for shorter service. Benefit plan of company is is general on a contributory basis, but employees' contributions cannot be used for pensions or death benefits.

[s] According to length of service.

II. Non-Contributory "Limited—Contractual" Systems (*Continued*)

Company	Date of Plan	Age and Service Requirements: Age	Age and Service Requirements: Service	Amount of Pension: % of av. salary for final 10 yrs. to be multiplied by yrs. of service[a]	Amount of Pension: Max.	Amount of Pension: Min.	Death Benefit Provision
Standard Oil Co......... (Louisville, Ky.)	1918	60 50 (F)	20 20	2% (5 yrs.)	75% of such av. pay	$300 per yr.	In plan.
Standard Oil Co......... (New Jersey)	1918	65 50 (F)	20 30	2% (5 yrs.)	75% of such av. pay	$300 per yr.	In plan.
Standard Oil Co......... (Neodesha, Kan.)	1918	60 50 (F)	20 30	2%	75% of such av. pay	$300 per yr.	Col. plan.
Standard Oil Co......... (Omaha, Neb.)	1918	60 50 (F)	20 30	2%	75% of such av. pay	$300 per yr.	In plan.
Standard Oil Co......... (San Francisco, Cal.)	1918	60 50 (F)	20 30	2% (5 yrs.)	75% of such av. pay	$300 per yr.	Life Ins.
Studebaker Corporation.	1919	60	20 20	25% av. pay for final 5 yrs. (flat)		$30 per mo.	In plan.
Sullivan Machinery Co..	1915	60 55 (F)	20	1%		$20 per mo.	Life Ins.
U. S. Rubber Co........	1917	65	20	1%	$5,000 per yr.	$240 per yr.	
Western Electric Co.....	1913	60 55 (F)	20 20	1%		$20 per mo.	In plan.

Westinghouse Air Brake Co.	1908	65		1%[t]	$100 per mo.	$30 per mo.	In plan.
Westinghouse Elec. & Mfg. Co.	1915	70	20	1%	$100 per mo.	$20 per mo.	Life Ins.
Winchester Repeating Arms Co.	1915	60 55 (F)	25 25	1% (5 yrs.)		$20 per mo.	

[e] i.e., not multiplied by years of service.
[t] Based on average pay for 10 years out of final 20 (or less) showing highest pay.

III. CONTRIBUTORY SYSTEMS

Company	Date of Plan	Age and Service Requirements		Contribution of Employee	Amount of Pension	Max.	Min.
		Age	Service				
Armour & Co.......... (For salaried employees only)	1911	57 50 (F)	20 20	3% of salary[a][b]	2% of final salary, for every year of service	$5,000	
Darling & Co..........	1920	60 50 (F)	30 25	3% of salary (not to exceed $300 yearly)[c]	Half of average pay for last 30 yrs. (25 yrs. in case of females)	$3,000	
Elgin National Watch Company		65 55 (F)	20 20	2% of salary[d]	1/50 of average wage for final 10 yrs. for every yr. of service (not exceeding 25) plus ½% for each yr. in excess of 10 that contributions have been made		

Hibbard, Spencer, Bartlett & Co.		65 60 (F)	15 15	2% of salary [e]	Half pay (based on final 5 yrs.)	$1,000	
Morris & Co.	1909	55	20	3% of salary [f]	2½% of final salary for every yr. of service		
Pittsburgh Coal Co. (See Note [g])							
Wilson & Co. (For salaried employees only)	1917	55 50 (F)	20 20	3% of salary (not to exceed $225 yearly)	2½% of average salary for final 3 yrs., for every yr. of service	⅔ of such average salary, or $5,000	

[a] Employees under 16 or those earning less than $10 per week do not participate.

[b] No employee required to contribute on a sum exceeding $7,500 per year. Company is to make contributions sufficient to build up and maintain permanent fund of $1,000,000.

[c] Company to contribute such amounts as "it feels warranted in doing."

[d] No contributions will be made and no pension based or computed on any portion of a salary or wage exceeding $4,000.

[e] Larger contributions ranging from 4% to 10% for males, and from 5% to 20% for females, required of employees of "advanced age," but for these participation in plan is optional.

[f] Employees receiving $10 per week or less participate, but do not contribute.

[g] The Pittsburgh Coal Company has a non-contributory annuity system for salaried employees. Its mine employees have a contributory pension plan in connection with its Relief Department but, as this is based on total contributions of only 8 cents per member per month, it hardly comes within the designation of a contributory pension system for the purposes of this study.

REMARKS

Armour & Co. plan:

Plan compulsory for men; optional for women; not applicable to married women. Provision for benefits to widows and for return of contributions without interest to employees resigning; with interest at four per cent compounded semi-annually in case of dismissal. Company controls administration of plan.

Darling & Co. plan:

Plan compulsory for new office employees; optional for those on a daily wage basis. Employees' contribution, with interest at four per cent compounded semi-annually, returned in event of resignation or dismissal; double this to estates of those who die. Employees participate in administration of plan.

Elgin National Watch Co. plan:

Plan compulsory for new employees except those of advanced age; optional for existing force over twenty-one (for males) and over eighteen (for females). Employees' contribution returned without interest in case of dismissal or resignation. Half pension for widows or dependent children of a deceased pensioner for a period of five years. Employees elect one of the five trustees of the Pension Fund. Continuous contributions for at least ten years required to establish eligibility.

Hibbard, Spencer, Bartlett & Co. plan:

Plan compulsory except for older employees and for salesmen receiving commissions in addition to salary. Employees' contribution with simple interest at three per cent returned in event of resignation, dismissal, or death, or liquidation of fund. Pensions not to continue for a period longer than that during which contributions were made (unless for twenty years or more). Employees do not participate in administration of plan. The company is to contribute an amount equal to the aggregate contributions of employees.

Morris & Co. plan: (The terms of the Wilson Co. plan are practically the same.)

Plan compulsory for new salaried employees earning over $10 per week; optional for those on a daily wage basis. Provision for benefits to widows and for return of contributions in event of resignation or dismissal. Employees participate in administration of plan.

APPENDIX II

SELECTED BIBLIOGRAPHY

No attempt has been made, in preparing this bibliography, to compile an extended list of works on the subject of pensions, but, instead, merely to include a selected number of books and articles which seem of particular value to the employer who may be considering the adoption of a pension plan, or to the general student of the subject.

General

Industrial Pensions. Merchants' Association of New York, 1920. Report of Special Committee on Industrial Pensions and Report of a Survey of Industrial Pension Systems by the Industrial Bureau of the Association.

A brief, but valuable, discussion.

Old Age Dependency in the United States. Lee Welling Squier. 1912. A general survey of the pension movement up to that time.

Principles Governing the Retirement of Public Employees. Lewis Meriam. 1918.

While dealing with pensions in the public service, this work is of great value to the student of private pension systems. A special feature is the frequent reference to other literature on the pension problem.

Pensions for Hospital Officers and Staffs. Sub-Committee of the Executive Committee of King Edward's Hospital Fund for London. 1919.
An elaborate work containing a large amount of material on the operation of various British pension funds, as well as a discussion of the broader phases of the problem.

Reports of the Carnegie Foundation for the Advancement of Teaching. Nearly all the annual reports of the Foundation contain references to the pension problem. Special mention may be made of Bulletin No. Nine (1916), "A Comprehensive Plan of Insurance and Annuities for College Teachers," by Henry S. Pritchett, President of the Foundation, and Bulletin No. Eleven, "Pensions for Public School Teachers," by Clyde Furst and I. L. Kandel.

Teachers' Retirement Systems in the United States. Paul Studensky. 1920.

Official Reports

U. S. Government. Retirement of Employees in the Classified Civil Service. Various Hearings before the Senate Committee on Civil Service and Retrenchment and the House Committee on Reform in the Civil Service.

Retirement from the Classified Civil Service of Superannuated Employees.
Message from the President of the United States transmitting Report of the Commission on Economy and Efficiency on this subject. House Document No. 732, 62nd Congress, 2nd Session.

Illinois: Report of Illinois Pension Laws Commission, 1916; *Report of Illinois Pension Laws Commission,* 1918–1919.

Massachusetts: Report of Commission on Old Age Pensions, Annuities, and Insurance. 1910. House Document No. 1400.

Report of Commission on Pensions. 1914. House Document 2450.

Pennsylvania: Report of Pennsylvania Commission on Old Age Pensions. 1919.

Wisconsin: Report of Wisconsin Pension Laws Commission.

New York City: Report of Commission on Pensions: The Pension Funds of the City of New York.

Magazine Articles and Pamphlets

Broadening the Scope of Pensions in Private Industry: Paul Studensky. "*New Jersey.*" Vol. VI, No. 8. New Jersey Bureau of State Research.

Industrial Pensions: Russell Sage Foundation, December, 1919. A brief bibliography.

Industrial Retirement Systems Based on the Money Purchase Principle. J. H. Woodward. In *Economic World,* December 3 and December 10, 1921.

Our New Peonage: Discretionary Pensions. L. D. Brandeis in his "Business a Profession," 1914.

Problem of Pensions: National Civic Federation, 1916. Contains a tabulated analysis of various plans.

Pensions as Wages: Albert de Roode. *American Economic Review,* March, 1913. An exceptionally concise discussion of the subject.

The Fundamental Principles of Pension Funds: James J. M'Lauchlan. Transactions of the Faculty of Actuaries (London), 1909, Volume IV, Part VIII, No. 41.

The Pension Problem and the Philosophy of Contributions: Paul Studensky. 1917. Bureau of Municipal Research, New York City.

INDEX